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Report No. D-2011-061 May 3, 2011

Inspector General
United States Department of Defense

Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract with Boeing to Support the Corpus Christi Army Depot

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Acronyms and Abbreviations

AMC	Army Materiel Command
AMCOM	Aviation and Missile Life Cycle Management Command
BRAC	Base Realignment and Closure
CCAD	Corpus Christi Army Depot
CIT	Consumable Item Transfer
DCAA	Defense Contract Audit Agency
DCMA	Defense Contract Management Agency
DLA	Defense Logistics Agency
EBS	Enterprise Business System
FAR	Federal Acquisition Regulation
GAO	Government Accountability Office
GOLD	Government On-Line Data System
IG	Inspector General
LMP	Logistics Modernization Program
MES	Material Estimating System
NSN	National Stock Number
OEM	Original Equipment Manufacturer
PO	Purchase Order
RTAT	Repair Turnaround Time
U.S.C.	United States Code

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202–4704

May 3, 2011

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY, AND LOGISTICS
DIRECTOR, DEFENSE CONTRACT MANAGEMENT AGENCY
DIRECTOR, DEFENSE LOGISTICS AGENCY
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot (Report No. D-2011-061)

We are providing this report for review and comment. We identified $242.8 million to $277.8 million of excess DoD inventory that could be used to satisfy current and future contract requirements for the Apache and Chinook weapon systems. In addition, we calculated that Boeing charged the Army about $13 million (131.5 percent) more than the fair and reasonable prices for 18 parts. Also, Boeing contract prices were $8.0 million (51.2 percent) higher than Defense Logistics Agency prices for 1,635 parts. We considered management comments on a draft of this report when preparing the final report.

DoD Directive 7650.3 requires that recommendations be resolved promptly. The comments from the Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness) and the Commander, Army Aviation and Missile Life Cycle Management Command, were partially responsive or nonresponsive. In addition, we revised Recommendation B.3.a to clarify actions to be taken by the Director, Defense Procurement and Acquisition Policy. Therefore, we request additional comments on Recommendations A.2.a, B.3.a, C.1, and D.2.a by June 6, 2011.

If possible, send a .pdf file containing your comments to audacm@dodig.mil. Copies of your comments must have the actual signature of the authorizing official for your organization. We are unable to accept the /Signed/ symbol in place of the actual signature. If you arrange to send classified comments electronically, you must send them over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Please direct questions to Mr. Henry F. Kleinknecht at (703) 604-9324 (DSN 664-9324).

Richard B. Jolliffe
Assistant Inspector General
Acquisition and Contract Management

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Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot

What We Did

We evaluated the Army Aviation and Missile Life Cycle Management Command (AMCOM) material purchases from The Boeing Company (Boeing) supporting the Corpus Christi Army Depot (CCAD) to determine whether the partnership agreement effectively minimized the cost of direct materials to the depot. AMCOM entered into the partnership to address parts availability problems and improve readiness.

What We Found

AMCOM officials did not effectively use $339.7 million of existing DoD inventory before procuring the same parts from Boeing because DoD had inadequate policies and procedures addressing inventory use. We identified $242.8 million to $277.8 million of excess inventory that AMCOM could use to satisfy CCAD contract requirements. ***(See Excess Inventory on adjacent page.)***

In addition, AMCOM officials did not effectively negotiate prices for 18 of 24 high-dollar parts reviewed because neither AMCOM officials nor Boeing officials performed adequate cost or price analyses, and Boeing officials submitted cost or pricing data that were not current, complete, and accurate (7 parts). We calculated that Boeing charged the Army about $13 million or 131.5 percent more ($23 million versus $10 million) than fair and reasonable prices for the 18 parts. During the audit, Boeing issued the Army a credit for $324,616 for one of the defectively priced parts. After we issued the draft report, Boeing provided additional refunds of about $1.3 million. ***(See Pricing Problems on adjacent page.)***

Further, AMCOM officials overstated repair turnaround time improvements because they used inconsistent methodologies for calculating baseline and actual performance, showing a 46.7 percent improvement instead of an actual improvement of 26.1 percent to 36.9 percent. AMCOM officials overpaid incentives for the repair turnaround time improvements, and Boeing owes the Army a refund of $6.3 million to $10.9 million. Boeing also owes the Army an additional refund of $538,688 because it did not meet requirements in a subsequent contract phase.

Also, AMCOM officials did not use the most cost-effective source of supply for consumable items because DoD had not developed an effective material management strategy. We identified that the Defense Logistics Agency (DLA) had sufficient inventory to satisfy annual contract requirements for 1,635 parts on the follow-on contract, and the Boeing contract price for those items was $8.0 million, or 51.2 percent, higher than the DLA price.

Recommendations, Management Comments, and Our Response

Among other recommendations, the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics should issue policies and procedures addressing the inventory and pricing issues identified in this report. Also, DoD needs to develop an effective strategy to use on hand and due-in Government inventory before procuring the same parts on partnership agreements. Overall, management comments were responsive, and management is taking action to address inventory and pricing issues. AMCOM is working with DLA to develop an effective strategy to drawdown existing inventory before procuring new parts from Boeing and to effectively procure consumable items. However, some management comments were not fully responsive to the recommendations. Therefore, we request additional comments by June 6, 2011. Please see the recommendations table on page iii.

Excess Inventory

The Army is procuring parts from Boeing instead of using $242.8 million to $277.8 million of excess DoD inventory to satisfy CCAD requirements. (Finding A and Tables 2 and 3 of the report provide additional details.)

DoD Inventory Could Be Used to Meet CCAD Contract Requirements
(in millions)

	Fiscal Year					Subtotal	Remaining for Future Requirement	Total
	2010	2011	2012	2013	2014			
CCAD Contract Requirement	$99.1	$103.9	$112.5	$118.1	$122.2	$555.8		
Excess Inventory – 3 year contingency	$68.7	$ 49.8	$ 35.3	$ 23.9	$ 21.0	$198.7	$79.1	$277.8
Excess Inventory – 5 year contingency	$62.8	$ 42.1	$ 29.4	$ 22.0	$ 18.2	$174.5	$68.3	$242.8
Excess inventory was calculated by removing 3 or 5 years of DoD demand requirements outside CCAD requirements.								

Pricing Problems

The Army paid significantly higher prices to Boeing than if it would have procured the same parts from DLA. (Finding B, Tables 9 and 12, and Figures 10 and 12 of the report provide additional details.)

Spur Gear

DLA 2009 Unit Price: $12.51
Boeing 2009 Unit Price: $644.75
Boeing Refunded: $556,006

Ramp Gate Roller Assembly

DLA 2009 Unit Price: $7.71
Boeing 2009 Unit Price: $1,678.61
Boeing Refunded: $76,849

Recommendations Table

Management	Recommendations Requiring Comment	No Additional Comments Required
Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness)	A.2.a	A.2.b
Director, Defense Procurement and Acquisition Policy	B.3.a	B.3.b, D.1
Commander, Army Materiel Command		A.1
Director, Defense Logistics Agency		A.1
Commander, Army Aviation and Missile Life Cycle Management Command	C.1, D.2.a	A.3, B.2, C.2, D.2.b
Director, Defense Contract Management Agency		B.1

Please provide comments by June 6, 2011.

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Introduction

Objectives

The overall objective of the audit was to evaluate material purchases made at Corpus Christi Army Depot (CCAD) through the partnership agreement with The Boeing Company (Boeing). Specifically, we determined whether the partnership agreement[1] in place with Boeing effectively minimized the cost of direct materials to the depot.[2] See Appendix A for a discussion of the scope and methodology.

We also have an ongoing audit of the material purchases made at CCAD through the partnership agreement with Sikorsky Aircraft Corporation (Project No. D2010-D000CH-0077.001). Additionally, CCAD has similar partnership agreements with Honeywell International, Inc. (Honeywell) and General Electric Aircraft Engines.

We performed this audit pursuant to Public Law 110-417, "Duncan Hunter National Defense Authorization Act for Fiscal Year 2009," section 852, "Comprehensive Audit of Spare Parts Purchases and Depot Overhaul and Maintenance of Equipment for Operations in Iraq and Afghanistan," October 14, 2008. Section 852 requires:

> . . . thorough audits to identify potential waste, fraud, and abuse in the performance of the following: (1) Department of Defense contracts, subcontracts, and task and delivery orders for—(A) depot overhaul and maintenance of equipment for the military in Iraq and Afghanistan; and (B) spare parts for military equipment used in Iraq and Afghanistan . . .

Background

Corpus Christi Army Depot

CCAD, located in Corpus Christi, Texas, is a maintenance depot in the Army Working Capital Fund Industrial Operations activity group whose mission is to overhaul, repair, modify, retrofit, test, and modernize helicopters, engines, and components for all Services and foreign military customers. CCAD also is actively engaged in resetting equipment returning from operations in Iraq and Afghanistan. CCAD is under the operational control of the Army Aviation and Missile Life Cycle Management Command (AMCOM).

Army Aviation and Missile Life Cycle Management Command

AMCOM is headquartered at Redstone Arsenal, Alabama, and is a major subordinate command of the Army Materiel Command (AMC). AMCOM was established as a readiness

[1] The partnership agreement is a contract for technical, engineering, and logistics services support and for material parts support.
[2] The DoD Office of the Assistant Inspector General for Defense Business Operations originally announced the audit in February 2009. In November 2009, the audit was transferred to the DoD Office of the Assistant Inspector General for Acquisition and Contract Management and reannounced.

command to develop, acquire, field, and sustain aviation and missile weapon systems. AMCOM provides life-cycle management of Army aviation and missile systems from research and development to procurement and production, from spare parts availability to flight safety, and from maintenance and overhaul to retirement. In addition, AMCOM strives to ensure that the Army's aviation and missile weapon systems are technologically superior, affordable, and always ready for use.

Defense Logistics Agency

The Defense Logistics Agency (DLA) is DoD's largest logistics combat support agency. Headquartered at Fort Belvoir, Virginia, DLA provides logistics, acquisition, and technical services to the Army, Navy, Air Force, Marine Corps, other Federal agencies, and joint and allied forces. DLA reportedly supplies 84 percent of the military's spare parts. The DLA primary-level field activities include DLA Land and Maritime (Columbus, Ohio); DLA Troop Support (Philadelphia, Pennsylvania); and DLA Aviation (Richmond, Virginia).

Boeing

Boeing is the world's leading aerospace company and the largest manufacturer of commercial jetliners and military aircraft combined. Additionally, Boeing designs and manufactures rotorcraft (rotary-wing aircraft), electronic and Defense systems, missiles, satellites, launch vehicles, and advanced information and communication systems.

AH-64 Apache Helicopter

The Army began using the AH-64 Apache (Apache) helicopter in 1984. It is the Army's heavy division/corps attack helicopter. Its mission is to conduct rear, close, and shaping missions including deep, precision strikes. In addition, it conducts precision strikes against moving targets and provides armed reconnaissance when required in day, night, obscured battle field, and adverse weather conditions. The Apache, shown in Figure 1, is manufactured by Boeing in Mesa, Arizona.

Figure 1. AH-64 Apache Helicopter

Source: www.army.mil

CH-47 Chinook Helicopter

The venerable twin-engine, tandem rotor CH-47 Chinook (Chinook) helicopter was first used in 1962 in Vietnam. Its mission is to transport ground forces, supplies, ammunition, and other battle-critical cargo in support of worldwide combat and contingency operations. The Chinook, shown in Figure 2, is manufactured by Boeing in Philadelphia, Pennsylvania.

Figure 2. CH-47 Chinook Helicopter

Source: www.army.mil

CCAD/Boeing Contracts

In an effort to streamline its logistic infrastructure, CCAD officials reviewed ways to implement the most successful business practices that would result in reductions in Apache and Chinook weapon systems repair turnaround time, lower required inventory levels, improved readiness, increased depot capacity, and reduction in total cost. As a result, CCAD officials entered into a partnership agreement[3] with Boeing to support the warfighter in an efficient and cost-effective manner. The AMCOM Contracting Center awarded two contracts to Boeing to provide technical, engineering, and logistical services support and supplies to CCAD for the overhaul, repair, and recapitalization of the Apache and Chinook weapon systems.

Contract W58RGZ-04-C-0203

The AMCOM Contracting Center awarded the initial CCAD/Boeing contract, W58RGZ-04-C-0203, on June 30, 2004, for Phase I of the partnership. It was a firm-fixed-price contract for technical, engineering, and logistical support and emergency parts from July 1, 2004, through October 31, 2004. The total value of Phase I was $46.9 million. Phases II and III of the contract continued technical, engineering, and logistical services support and added material parts support for the Apache and Chinook weapon systems. The

[3] AMC defines a partnership agreement as a documented business relationship between two or more groups that is characterized by mutual cooperation, trust, and responsibility to achieve a specified goal.

AMCOM Contracting Center awarded Phase II on November 1, 2004, and Phase III on June 19, 2006. The performance period of both phases was through October 31, 2009, and was extended through April 30, 2010. As of September 9, 2010, the total value of Phases II and III was $850.0 million; however, $275.1 million of the contract value was related to performance-based logistics of the AH-64 Apache D-unique components.[4]

Contract W58RGZ-10-D-0027

On February 1, 2010, the AMCOM Contracting Center awarded the follow-on CCAD/Boeing contract, W58RGZ-10-D-0027, as an unpriced contract action not to exceed $108.6 million, and modified the contract on May 1, 2010, to incorporate services and supplies, which increased the not to exceed amount to $121.6 million. The contract was to be definitized within 6 months of award as a 5-year, firm-fixed-price contract (February 1, 2010 through January 31, 2015). However, according to the Director, Aviation Logistics, AMCOM Contracting Center, the planned completion date for contract definitization was extended to December 31, 2010.

Nonstatistical Audit Sample of Material

We selected 437 national stock numbers (NSN) or parts,[5] 85 percent of the total dollar value of material Boeing was required to furnish for the Apache and Chinook weapon systems for contract years 2008 and 2009. As shown in Table 1, our sample of 437 parts included 98 Army-managed parts (Army Items); 120 DLA-managed parts that the Army transferred to DLA at no cost in August 2008 as part of a consumable item transfer (CIT) required by the 2005 Base Realignment and Closure (BRAC) supply and storage recommendations; and 168 DLA-managed consumable items (DLA Consumables). We were unable to obtain procurement history for 13 sample parts, and 38 parts were on the initial contract but not on the follow-on contract. For more detailed information on the sample selection, see Appendix A.

Table 1. Sample of Material Parts

	Number of Parts	**2008 & 2009 Contract Dollar Value** (in millions)	**2010 Contract Dollar Value** (in millions)
Army Items	98	$ 77.5	$24.1
CITs	120	77.7	41.7
DLA Consumables	168	63.6	24.6
Subtotal	**386**	**$218.8**	**$90.4**
No Procurement History	13	7.7	2.3
Not on Follow-on Contract	38	19.3	0.0
Total	**437**	**$245.8**	**$92.7**

[4] We did not review the portion of the contract related to performance-based logistics of the AH-64 Apache D-unique components.

[5] We selected the sample of 437 NSNs based on the 2008 and 2009 contract requirements that were $100,000 or greater when combined.

Towards the end of the audit, we obtained access to the DoD EMALL[6] and used inventory and pricing information from that system for more than 3,000 NSNs on the follow-on CCAD/Boeing contract.

Review of Internal Controls

DoD Instruction 5010.40, "Managers' Internal Control Program (MICP) Procedures," July 29, 2010, requires DoD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. We identified internal control weaknesses for the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics and AMCOM.

Specifically, DoD has inadequate policies and procedures addressing the use of DoD inventory before entering into contractor logistics support and performance-based logistics arrangements or contracts. Additionally, the contracting officer and Boeing did not perform adequate cost or price analyses to establish the reasonableness of proposed subcontract prices that were used to support negotiated prices, and the contracting officer did not request Defense Contract Audit Agency (DCAA) to conduct field pricing assist audits. Moreover, DoD had inadequate policies and procedures addressing splitting versus consolidating procurement and management requirements for consumable items.

For specific results of these weaknesses, see Findings A, B, and D of this report. We will provide a copy of the report to the senior official responsible for internal controls in the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics and AMCOM.

[6] The DoD EMALL is a full-service, eCommerce site that strives to be the single entry point for purchasers to find and acquire off-the-shelf finished goods and services from the commercial marketplace and Government sources. The DoD EMALL offers cross-store shopping to compare prices and other best value factors. The DoD EMALL suppliers are Government-approved sources and comply with Federal Acquisition Regulation requirements.

Finding A. Excess DoD Inventory

AMCOM officials did not effectively use $339.7 million of DoD inventory before procuring the same parts directly from Boeing under the CCAD/Boeing contract to support the Apache and Chinook weapon systems. DoD inventory was not effectively used for the following reasons.

- AMCOM officials did not initially stop "parts explosion"[7] (primarily for the Chinook helicopter) after the CCAD/Boeing contract was awarded and they procured the parts from two sources to meet the same requirement.

- AMCOM officials transferred consumable item inventory to DLA Aviation in 2008 as part of a 2005 BRAC supply and storage recommendation, but did not transfer requirements for the parts that are now being met by Boeing on the CCAD/Boeing contract.

- DLA, the Army, and Boeing all used different systems to manage inventory and requirements; no system exists that provides total asset visibility or requirements information; and no one had taken responsibility to periodically match available DLA inventory identified in the DoD EMALL with CCAD/Boeing contract requirements.

- DoD had inadequate policies and procedures addressing use of DoD inventory before entering into contractor logistics support and performance-based logistics sustainment strategies.

As a result, we identified $242.8 million to $277.8 million[8] of excess DoD inventory that could be used to satisfy CCAD Apache and Chinook helicopter contract requirements ($174.5 million to $198.7 million over the next 5 years with an additional $68.3 million to $79.1 million that could be used to satisfy future contract requirements). In addition, representatives from Boeing stated that they also had $131.1 million of Boeing inventory on hand and $41.9 million due in for CCAD requirements.

DoD Inventory

According to the contractor-furnished material attachments to the follow-on CCAD/Boeing contract, relating to our audit sample of 386 parts, AMCOM officials plan to buy $555.8 million (contract requirements) of inventory from Boeing over the next 5 years.

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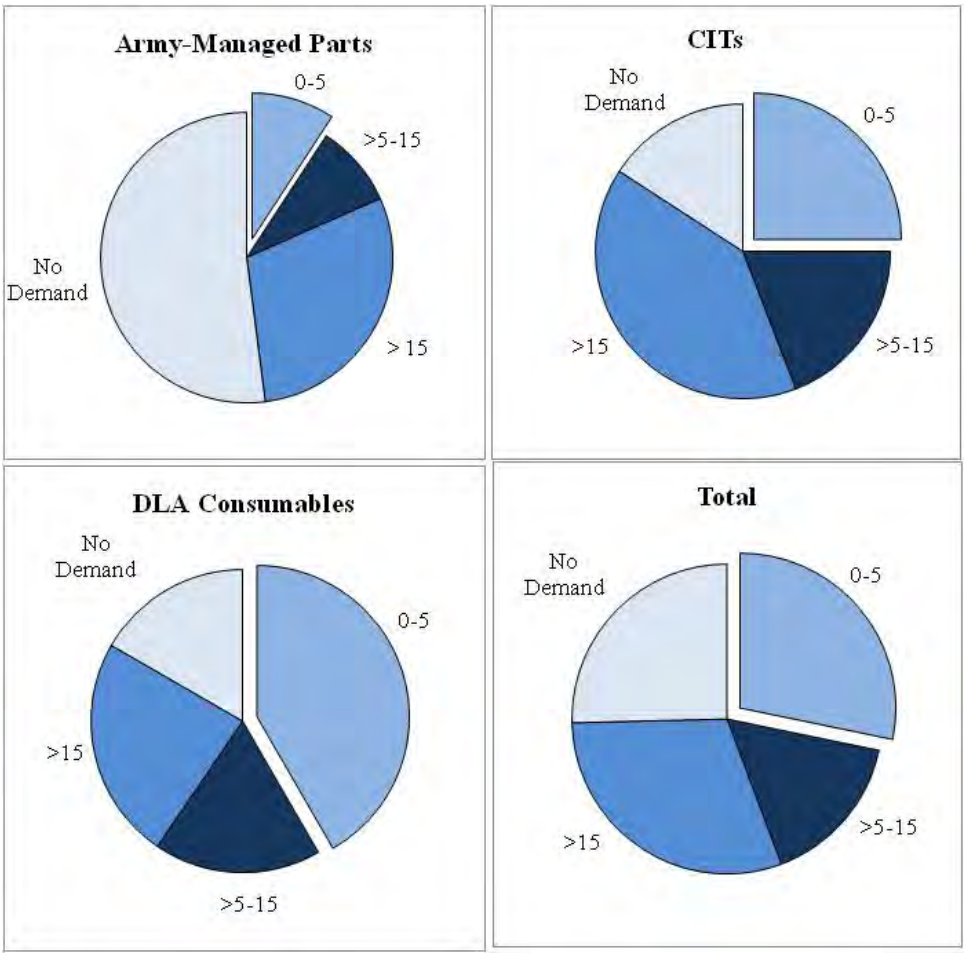
[7] Parts explosion is a term used by AMCOM to define the process of buying the number of parts needed to support the repair programs and depot rebuild requirements for a weapon system.

[8] Our calculation is based on the unit prices in the contractor-furnished material attachments in the follow-on CCAD/Boeing unpriced contract action awarded February 1, 2010, which has not been fully negotiated and definitized. We applied 2009 contract prices to requirements in the 2010-2014 contractor-furnished material attachments that did not have an associated unit price due to Government-furnished material. The range of excess inventory depends on whether DoD retains a 3-year or 5-year contingency stock for requirements outside the CCAD/Boeing contract.

However, based on June 2010 Federal Logistics Information System prices, we calculated that DoD had $339.7 million of the same parts in inventory that must be used.

DoD warehouses contained high levels of inventory for much of the material in our audit sample, but there was little to no demand for these materials outside the CCAD/Boeing contract. Figure 3 shows a breakout of our audit sample by Army-managed parts, CITs, and DLA Consumables, and the years of inventory in DoD warehouses. We used the 2009 demand levels as the basis to calculate the years of inventory or the time period before the existing inventory will be consumed. The cutaway section of each pie graph depicts 0 to 5 years of demand or the amount of inventory that we think is reasonable to retain. In total, DoD had greater than 5 years of inventory for 72 percent of the parts in our audit sample (excluding CCAD/Boeing contract requirements).

Figure 3. Years of Existing Inventory Excluding CCAD/Boeing Contract Requirements



An example of the excess inventory is sample 218, a rotary tank assembly used on the Chinook helicopter. AMCOM officials spent $143,065 to procure a quantity of 284 parts from Boeing in 2009. The planned requirement on the follow-on contract is for 945 more during the 5-year performance period, at a total value of $485,974, or an average unit price of $514.26. However, as of November 2009, DoD had 5,787 rotary tank assemblies in inventory–1,396 at

the Defense Distribution Depot Corpus Christi, Texas, and 4,391 at the Defense Distribution Depot Red River, Texas. The value of this inventory, based on the June 2010 unit price listed in the Federal Logistics Information System, was about $1.2 million or $203.00 per part. According to DLA data, only 51 of the parts were requisitioned in 2009, and according to AMCOM data, the annual requirement outside of the CCAD/Boeing contract was 27; therefore, DoD had more than 100 years of inventory of this part. Figure 4 shows the rotary tank assembly in storage at the Defense Distribution Depot Corpus Christi, Texas.

Figure 4. Sample 218 – Rotary Tank Assembly

See Appendix B for additional examples of excessive inventory.

Existing Inventory Could Satisfy CCAD Requirements

The existing DoD inventory could be used to satisfy requirements on the follow-on CCAD/Boeing contract. Specifically, we identified $174.5 million to $198.7 million of Apache and Chinook contract requirements scheduled to be procured over the next 5 years that could be satisfied with existing DoD inventory. We also identified an additional $68.3 million to $79.1 million that could be used to satisfy future CCAD requirements. Consequently, DoD has $242.8 million to $277.8 million in existing inventory that could be used to satisfy current and future CCAD requirements.

DoD has $242.8 million to $277.8 million in existing inventory that could be used to satisfy current and future CCAD requirements.

Maximum Velocity Drawdown of Inventory

We developed two drawdown plans for the material on the follow-on CCAD/Boeing contract relative to our audit sample of 386 NSNs that provide for retaining either 3 years or 5 years of inventory as contingency stock. In both plans, DoD would then use the maximum amount of remaining existing inventory to meet the planned workload requirements on the follow-on contract.

DoD has $277.8 million of excess inventory (if 3 years of contingency stock is retained) that could be used to meet CCAD contract requirements. Specifically, AMCOM officials could

use $198.7 million of the $277.8 million over the next 5 years, as shown in Table 2. For example, the 2010 contract requirement for our sample of 386 NSNs was $99.1 million; however, DoD has $68.7 million of excess inventory that could be used to satisfy this requirement. If AMCOM officials used the excess inventory, they would have to fund the contract for only $30.4 million in 2010.

Table 2. DoD Inventory Could Be Used to Meet Contract Requirements (3 Years of Contingency Stock)
(in millions)

386 NSNs*	Fiscal Year					Subtotal	Remaining for Future Requirement	Total
	2010	2011	2012	2013	2014			
Contract Requirement	**$99.1**	**$103.9**	**$112.5**	**$118.1**	**$122.2**	**$555.8**		
Army Items (98 NSNs)	24.5	20.9	16.8	12.1	10.5	84.8	$52.9	$137.7
CITs (120 NSNs)	30.4	23.3	16.8	11.1	10.2	91.8	25.5	117.3
DLA Items (168 NSNs)	13.8	5.6	1.7	0.7	0.3	22.1	0.7	22.8
Excess DoD Inventory	**$68.7**	**$ 49.8**	**$ 35.3**	**$ 23.9**	**$ 21.0**	**$198.7**	**$79.1**	**$277.8**

* Not all NSNs have excess inventory

Table 3 shows that DoD has $242.8 million of excess inventory (if 5 years of contingency stock is retained) that could be used to meet CCAD contract requirements. Specifically, AMCOM officials could use $174.5 million of the $242.8 million over the next 5 years.

Table 3. DoD Inventory Could Be Used to Meet Contract Requirements (5 Years of Contingency Stock)
(in millions)

386 NSNs*	Fiscal Year					Subtotal	Remaining for Future Requirement	Total
	2010	2011	2012	2013	2014			
Contract Requirement	**$99.1**	**$103.9**	**$112.5**	**$118.1**	**$122.2**	**$555.8**		
Army Items (98 NSNs)	22.9	17.0	13.6	11.1	10.3	74.9	$47.6	$122.5
CITs (120 NSNs)	28.9	21.6	14.5	10.4	7.7	83.1	20.1	103.2
DLA Items (168 NSNs)	11.0	3.5	1.3	0.5	0.2	16.5	0.6	17.1
Excess DoD Inventory	**$62.8**	**$ 42.1**	**$ 29.4**	**$ 22.0**	**$ 18.2**	**$174.5**	**$68.3**	**$242.8**

* Not all NSNs have excess inventory

Our drawdown plans include first using the inventory identified by Boeing in January 2010 that the Army bought back under the initial CCAD/Boeing contract[9] and inventory in the Army work-in-process control account.[10] Representatives from Boeing stated that they also had $131.1 million of Boeing inventory on hand and $41.9 million due in to support CCAD contract requirements and that this value does not include inventory carrying costs.

Management Action Initiated

During the audit, we briefed AMCOM officials extensively on the excess inventory issue. Subsequently, AMCOM officials developed a plan that addressed the Army-managed parts for the Chinook helicopter. However, the AMCOM plan addressed only $83 million of the $122.5 million to $137.7 million of existing Army-managed inventory over the next 10 years. The Army had not taken any action to address the CITs or DLA-managed parts, which accounted for $120.3 million to $140.1 million of the existing inventory we identified. *The Commander, AMC, and the Director, DLA, need to establish a team consisting of representatives from AMCOM, DLA Aviation, CCAD, and Boeing to develop a plan to drawdown excess DoD inventory that could be used to meet CCAD requirements. Additionally, provisioning conferences should be held at least annually to revisit the excess inventory situation until it is resolved.* [Recommendation A.1]

Reasons for the Excessive Inventory

AMCOM officials did not effectively use DoD inventory because:

- the AMCOM Chinook team did not stop parts explosion during the performance period of the CCAD/Boeing contract;
- they transferred consumable items to DLA Aviation for management, but did not transfer demand requirements of those parts;
- there is no DoD system that provides total asset visibility of DLA, Army, and Boeing inventory; and
- DoD did not have adequate policies and procedures regarding the use of existing inventory before procuring material from private contractors under partnering agreements or performance-based logistics sustainment strategies.

However, an underlying reason for the excess inventory was that no one had taken responsibility to periodically match available DLA inventory identified in the DoD EMALL with CCAD/Boeing contract requirements.

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[9] The initial CCAD/Boeing contract allowed for Boeing to identify excess material at the end of each option year and the Army agreed to purchase the excess material, or buyback, for Boeing to then use as Government-furnished material to support the requirements for subsequent option years. The Army's obligation was to purchase 100 percent of the excess contractor material at the end of each of the 4 option years.

[10] The work-in-process control account is a computer-controlled warehouse storage and retrieval system.

Parts Explosion Not Stopped

AMCOM officials did not initially stop parts explosion, primarily for the Chinook, after awarding the CCAD/Boeing contract and were procuring the parts from two sources to meet the same requirement. In fact, almost 5 years after Boeing had been performing the contract requirements, the parts explosion for the Chinook was still going on. The April 15, 2009, business case analysis for the follow-on CCAD/Boeing contract indicated that the Chinook parts explosion was still going on, but the Apache parts explosion had been stopped.

Although AMCOM officials placed the majority of the material on the CCAD/Boeing contract by July 2006, they continued to purchase the Chinook parts from other sources. The AMCOM Commander stated that at the beginning of the CCAD/Boeing contract, AMCOM officials were not fully satisfied with the overall support Boeing was providing and were concerned about the effect that Boeing's nonperformance would have on the warfighter. Their major concern was the amount of time the Army would need to obtain the parts if Boeing did not provide the parts. Therefore, AMCOM officials kept a second source of supply as a risk mitigation strategy because the overall mission of supporting the warfighter would be seriously affected if the parts were not available when needed. However, the Commander stated that over the life of the contract, confidence in Boeing as a partner greatly increased, and AMCOM officials were very pleased with the results of the CCAD/Boeing contract.

In April 2010, the Associate Director for Aviation, AMCOM Integrated Materiel Management Center, stated that the Chinook parts explosion had stopped. However, there was still inventory that was due in. The Chinook item manager stated that AMCOM officials planned to drawdown the parts used in the depot on the follow-on contract and developed a plan to offer these parts to Boeing as Government-furnished material.

AMCOM Consumable Item Transfers

In August 2008 AMCOM officials transferred the management of $91.3 million of consumable items in our sample to DLA Aviation in accordance with a 2005 BRAC recommendation. This was the value of 129 sample parts (54,565 individual parts) that we identified as transferred to DLA Aviation. (See Finding D for more details on consumable item transfers, the 2005 BRAC supply and storage recommendation, and DoD's strategy for managing parts.) In accordance with DoD Policy Manual 4140.26M, "Defense Integrated Materiel Management Manual for Consumable Items," May 1997, AMCOM officials transferred the parts on a nonreimbursable basis to DLA Aviation. Although AMCOM officials transferred the management of these parts to DLA Aviation, they did not also transfer requirements for the majority of the parts, especially those used mainly for depot-level repairs. Therefore, AMCOM officials transferred $91.3 million of inventory to DLA Aviation but did not transfer requirements for the parts. AMCOM officials procured the parts to fulfill CCAD requirements through the CCAD/Boeing contract instead of using DLA inventory.

AMCOM officials transferred $91.3 million of inventory to DLA Aviation but did not transfer requirements for the parts.

As shown in Figure 3, 75 percent of the CITs had more than 5 years of inventory. If AMCOM officials continue to procure the parts from Boeing instead of using the existing inventory transferred to DLA Aviation, the parts will remain unused in DLA warehouses, and the Army will be paying for material twice, first when it purchased the parts that it transferred to DLA Aviation, then again when it buys the same parts from Boeing.

For example, one of the consumable items that AMCOM officials transferred to DLA Aviation was a linear actuating cylinder piston, NSN 1650-01-311-2580 (Sample 25). As of April 2010, DLA had 439 on hand and 1,420 due in from an AMCOM contract, for a total of 1,859 in inventory at $4,864.50 each; a total of $9.0 million in inventory. Only 42 were requisitioned from DLA in 2009, and these were requisitioned primarily by AMCOM in the first 2 quarters of 2009. Since the second quarter of 2009, only one had been requisitioned; therefore, DLA had more than 44 years of inventory for this part because there is almost no demand for the part outside the CCAD/Boeing contract. AMCOM officials plan to spend an additional $4.1 million to procure 868 more of this part from Boeing during the 5-year performance period of the follow-on CCAD/Boeing contract. Figure 5 shows the linear actuating cylinder piston, which is used on the Chinook helicopter.

Figure 5. Sample 25 – Linear Actuating Cylinder Piston

Source: Defense Distribution Depot Susquehanna, Pennsylvania

The parts that were due in to the DLA inventory were from an AMCOM contract with Transaero, Inc., and were scheduled to be delivered through August 2012. In response to a discussion draft of this report, AMCOM officials took prompt action to begin a review of due in parts to determine the cost to terminate existing contract deliveries. AMCOM officials stated that once the data are received, they will conduct a review and take action to terminate the contracts when it is cost-effective. We commend AMCOM officials for their prompt action, and no further action is required.

According to the AMCOM business case analysis for BRAC CITs, consumable items that were part of contractor logistics support contracts, such as the CCAD/Boeing contract, were to continue to be managed by the contractor within the Army system. The business case analysis defined consumable items that are part of a contractor logistics support contract as any item managed, stocked, stored, and issued by a contractor to military operations and

maintenance activities. The business case analysis also stated that removing the consumable items from the contractor logistics support contracts and transferring them to DLA Aviation for management would undermine the outsourcing efforts and result in inefficiencies and readiness issues. Therefore, it appears that the consumable items AMCOM officials transferred to DLA Aviation in August 2008 should have been coded to stay within the Army system and been waived from 2005 BRAC transfer requirements. If the Army continues to transfer items to DLA Aviation to meet BRAC requirements, it needs to ensure that those items are coded correctly for transfer and also needs to transfer the demand and requirements for those parts. If not, this situation will continue to occur, and existing inventory may go unused while the Army pays twice to acquire the same items from private contractors under partnering agreements and other performance-based logistics sustainment strategies.

The Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness) needs to develop an equitable plan to use the consumable items transferred to DLA Aviation under the 2005 BRAC recommendations that do not have sufficient demand outside the CCAD/Boeing contract. [Recommendation A.2.a]

The Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness) should also issue policies and procedures that instruct the Services not to transfer consumable items to DLA when demand requirements are going to be met under contractor logistic support or performance-based logistics contracts managed by the Services. [Recommendation A.2.b.(1) – Internal Control]

CIT Pricing Error

The transfer price of the 129 consumable items that AMCOM officials transferred to DLA Aviation in August 2008 included an Army cost recovery rate that DLA normally decrements to establish the DLA cost-based price that DLA then marks up with its cost recovery rate to establish a standard unit price, or the DLA sell price. However, because of system problems, DLA did not decrement the Army transfer price but instead used the transfer price as the DLA standard unit price. Then when the DLA system updated prices for parts in 2010, the system automatically used the DLA standard unit price as the cost-based price and marked that price up by the DLA cost recovery rate of 41 percent. Consequently, DLA used the Army transfer price that included the Army markup and then added the DLA 41 percent cost recovery or, in essence, DLA Aviation applied its cost recovery rate to Army transfer items that also included the Army cost recovery rate.

DLA Aviation applied its cost recovery rate to Army transfer items that also included the Army cost recovery rate.

Management Action

After we informed DLA Aviation of this issue during the audit, the DLA Aviation Budget Division Chief took prompt action and had DLA Aviation analysts implement a system change request to rewrite the program and correct the prices of all CITs transferred in August 2008, not just the 129 sample items. In addition, the Division Chief stated that the system change should prevent such an error from occurring in future consumable item

transfers because the system will automatically apply a decrement to the standard unit price when a cost-based price is not available. We commend DLA Aviation for its prompt action during the audit to resolve the pricing issue, and no further action is required.

No Total Asset Visibility and Unclear Responsibilities

DLA, the Army, and Boeing all used different systems to manage inventory and requirements, and no system exists that provides total asset visibility or requirements information. The Army used the Logistics Modernization Program (LMP), Boeing used the Government On-Line Data System (GOLD), and DLA used the Enterprise Business System (EBS) to manage each of their inventories. Moreover, no one had taken responsibility to periodically match available DoD inventory with requirements.

Logistics Modernization Program System

In February 1998, AMC began an effort to replace its existing materiel management systems with LMP. Before LMP, AMC relied on a 30-year-old system to manage its logistics operations and supply critical equipment and repair parts to the soldier. The lack of a single, unified supply system across the Army fostered an environment in which numerous organizations developed independent material management systems. As a result, the Army faced serious challenges in managing its supply chain and distribution infrastructure. As of February 2007, LMP managed $4.5 billion worth of inventory, processed transactions with 50,000 vendors, and integrated with more than 80 DoD systems. When fully implemented, LMP is expected to include approximately 21,000 users at 104 locations across the globe, and it will be used to manage more than $40 billion worth of goods and services, such as inventory managed at the national level and repairs at depot facilities. According to the Government Accountability Office (GAO), LMP was implemented at AMCOM and CCAD in May 2009.[11]

Although the Army has visibility of inventory, requirements, and due in quantities of Army-managed parts through LMP, LMP does not provide visibility of inventory or requirements for DLA-managed parts or the consumable items that the Army transferred to DLA. According to members of the AMCOM Apache and Chinook Airframe Divisions, LMP gives AMCOM officials insight into only the Army inventory, stock on hand, and stock expected to be received, as well as demand information; it does not allow AMCOM officials to see the total amount of inventory DoD has as a whole. However, the DoD EMALL system can provide this information for DLA-managed parts as discussed in the "Enterprise Business System" section.

Government On-Line Data System

GOLD is Boeing's inventory management system. I-GOLD is a system with additional material requirement planning capabilities that supplements the GOLD system. I-GOLD handles inventory control, financial tracking, and job tasks. In addition, I-GOLD ensures that applications are integrated and communicating with each other. I-GOLD does not have

[11] GAO-10-461, "Defense Logistics: Actions Needed to Improve Implementation of the Army Logistics Modernization Program," April 2010.

visibility of any other inventory that the Army or DLA may have that could meet CCAD requirements. Boeing officials stated that they have limited access to DLA inventory and AMCOM inventory data.

Enterprise Business System

EBS is DLA's primary information technology solution to support the evolving logistics needs of DoD. EBS provides functionality in five core process areas: (1) order fulfillment–customer service and requisition processing, (2) planning–demand and supply planning, (3) procurement–sourcing and supplier management, (4) technical quality–product data and quality management, and (5) finance–financial processing and management. EBS includes visibility of only DLA inventory levels and demands, not any Army-managed inventory data. However, the DLA Aviation performance-based logistics program manager stated that all Service personnel can access the DoD EMALL through a common access card. Contractors, such as Boeing, would need Public Key Infrastructure certificates if they do not have common access cards to access DoD EMALL. DLA is the DoD's executive agent for the DoD EMALL. The DoD EMALL provides easy access to stock on hand levels, monthly consumption data, and DLA standard unit prices for all DLA-managed parts. DoD customers and suppliers, such as Boeing, have the ability to upload thousands of NSNs using the EMALL supportability analysis stock out report and then download the inventory data.

The DoD EMALL provides easy access to stock on hand levels, monthly consumption data, and DLA standard unit prices for all DLA-managed parts.

Using the DoD EMALL, we were able to obtain stock on hand data, consumption data, and the DLA standard unit price for 3,484 of the 3,989 NSNs on the follow-on CCAD/Boeing contract. As of September 2010, DLA had inventory valued at $141.0 million that could be applied to the follow-on contract. This same inventory would cost $251.8 million if procured from Boeing on the follow-on contract. See Findings B and D for pricing issues we identified on the CCAD/Boeing contract.

As shown in Table 4, DLA has $157.0 million (using the contract value) of inventory with either no demand or more than 5 years of demand that should be used to meet CCAD requirements.

Table 4. DLA Has Excess Inventory That Should be Used to Meet CCAD Requirements
(in millions)

Years to Buy	Number of NSNs	DLA Inventory Value	Contract Value*
No demand	441	$ 7.4	$ 11.2
>15	683	78.3	114.4
> 5 to 15	532	16.6	31.4
Subtotal	**1,656**	**$102.3**	**$157.0**
< 5	1,418	38.7	94.8
No inventory or not in DoD EMALL	915	N/A	N/A
Total	**3,989**	**$141.0**	**$251.8**

* The 2010 unit price or first available subsequent year price was used to calculate contract value. In addition, 297 NSNs were valued at 0 because no unit price was available or the unit of issue was not comparable.

This is not the first time we identified unused DoD inventory. During our review of the Air Force Secondary Power Logistics Solution Contract,[12] we identified about $70 million of unused DoD inventory because the Air Force was buying the same parts from a private contractor through a performance-based logistics arrangement. A clause in Army contracts requiring the use of existing Government inventory before procuring from a private contractor will help. However, DoD still needs to implement comprehensive policies and procedures requiring reviews of inventory levels and the use of existing DoD inventory before procuring the same parts from a private contractor under a contractor logistics support contract or other performance-based logistics sustainment strategies. If this does not happen, hundreds of millions of dollars will be wasted as the inventory sits in DLA warehouses, and DoD pays private contractors to provide the same parts.

The Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness) needs to develop and issue policy that requires the Services to use the DoD EMALL to determine whether DLA has excess inventory for all consumable items being procured from sources other than DLA under either contractor logistics support or performance-based logistics support sustainment strategies. The policy should also require the Services to quantify the excess inventory and develop a plan to use any excess inventory identified. [Recommendation A.2.b.(2) – Internal Control]

[12] DoD IG Report No. D-2010-063, "Analysis of Air Force Secondary Power Logistics Solution Contract," May 21, 2010.

Unclear Responsibilities

Each organization involved with material management for CCAD requirements has its own system to track requirements, stock on hand, and stock due in; but none of these systems are connected. Also, no one had taken responsibility to determine whether sufficient inventory was available to meet the requirements before procuring new parts, and no one has been assigned the responsibility to match CCAD requirements with excess DoD inventory.

The CCAD/Boeing contract did not include a clause requiring the use of existing inventory, but authorized Boeing to use DLA as a source of supply. Specifically, the contract stated that Boeing was authorized to use DLA as a Government source of supply if Boeing determined that DLA was the best value to the Government in terms of price and delivery. The follow-on contract contained similar language encouraging Boeing to use DLA as a source of supply but still does not require Boeing to use existing inventory before procuring new parts. Specifically, the follow-on contract requirement states that "Boeing is encouraged to utilize DLA as the preferred supplier for DLA-managed parts that are determined to be the best value to the Government in terms of price, delivery, and quality." See Finding D for information on the Boeing markup on parts obtained from DLA.

On February 23, 2004, AMCOM officials notified DLA of its intention to enter into a partnership contract with Boeing to provide technical, engineering, and logistical services and 100 percent of depot-related material in support of the Apache and Chinook weapon systems at CCAD. AMCOM officials informed DLA that Boeing would be the prime contractor, so DLA and AMCOM would become less involved in the procurement of the materials; however, there is no evidence that AMCOM officials provided DLA with the specific part-level requirements that would be placed on the contract. Neither of the acquisition plans for the initial or follow-on contracts indicated that DLA was involved with any of the planning for the contracts. The bundling strategy, approved before the award of the initial CCAD/Boeing contract, stated that for DLA-managed parts, Boeing would establish a memorandum of understanding to establish DLA as the central source of supply, which would result in no impact to DLA. However, the Boeing Program Manager for the contract stated that Boeing attempted to negotiate with DLA to use DLA as a source of supply but an agreement was never finalized because DLA could not guarantee availability of parts when needed.

*If AMCOM officials want Boeing to manage consumables items for CCAD requirements, they need to assign responsibility and make Boeing accountable through contract terms and metrics for eliminating the excess DoD inventor*y. [Recommendation A.3.a – Internal Control]

Inadequate DoD Policies and Procedures

DoD had inadequate policies and procedures for addressing use of DoD inventory before entering into contractor logistics services and performance-based logistics sustainment strategies wherein contractors provide materials that were previously provided by DoD. We identified guidance *encouraging* the use of DLA inventory but were unable to identify any policies or procedures *requiring* DoD inventory excess to requirements be used before procuring the same parts from a private contractor.

DoD Guidance

DoD Instruction 4151.21, "Public-Private Partnership for Depot-Level Maintenance," April 25, 2007, implements policy, assigns responsibilities, and prescribes procedures for depot-level maintenance public-private partnerships. This policy does not require that DLA inventory be drawn down by contractors before procuring new inventory for the partnership; however, it does acknowledge that DLA distribution centers may be affected and, therefore, should be included in planning partnerships to reduce the effect on them. Specifically, the policy states that DLA distribution depots co-located with depot-level maintenance activities, and DLA or Military Department logistics activities managing materiel provided to depot-level maintenance activities, may be affected by a depot-level public-private partnership. The instruction states that these affected activities should be invited to participate in the planning for depot-level partnerships, as appropriate.

The Defense Acquisition University, "Performance Based Logistics: A Program Manager's Product Support Guide," March 2005, discusses developing the supply chain management strategy, stating that this is critical to the success of any performance-based logistics effort. The guide states that unique DoD inventory should always be considered and that a plan for drawdown should be in place before buying spares and repairs from private sources; but the guide does not require that this be done.

Management Action

In May 2010, we briefed the Principal Deputy Assistant Secretary of Defense for Logistics and Materiel Readiness on the audit findings. He stated that his office should work with the Office of Defense Procurement and Acquisition Policy to ensure that the excess inventory issue does not occur in the future. During this meeting, the AMC Director of Support Operations stated that he was drafting policy that would require a mandatory contract clause in logistics support contracts with private contractors requiring the review and use of existing DoD inventory before going to a second source of supply. Our recommendation relating to the use of the DoD EMALL should be included in this policy.

On August 11, 2010, AMC issued a policy memorandum, "Order of Preference for Utilizing Repair Parts from Various Source of Supply (SOS) Inventories in Fulfilling Depot-Level Maintenance Oriented Performance Based Logistics (PBL) Agreements and Public-Private Partnerships." AMC issued the policy to ensure its Life Cycle Management Commands establish requirements for contractors to ". . . first use Government inventories to meet depot-level maintenance oriented performance-based logistics and public-private partnerships before acquiring new parts from commercial sources of supply." The policy requires Life Cycle Management Commands to deplete AMC inventories first and then to use DLA inventory for parts for which DLA is the primary source of supply. Maintenance support contactors can purchase parts from commercial sources only after all Government inventory is exhausted. The AMCOM contracting officer should incorporate this requirement into the undefinitized follow-on CCAD/Boeing contract, as described in the recommendation for contractor accountability.

Other Inventory Issues

We identified additional inventory issues on two parts that we reviewed during the audit. DLA and Boeing had excess inventory for both of the parts, but AMCOM officials did not have any planned requirements on the follow-on CCAD/Boeing contract for one of the parts and was no longer procuring the other part in individually wrapped packages.

Sample 276 – Direct Current Motor (NSN 6105-01-120-4285)

AMCOM officials did not have any planned requirements for the direct current motor on the follow-on CCAD/Boeing contract. According to CCAD officials, there is no need to replace this part because it is reworked when it is sent to the depot for repair. However, as of November 2009, AMCOM had 653 new direct current motors in inventory–572 at the Defense Distribution Depot Corpus Christi, Texas, and 81 at other Defense Distribution Depots that it purchased from General Electric for a unit price of about $877.85 or a total inventory value of $573,236. Additionally, Boeing had 20 parts in its inventory and the Boeing unit price for the part was $3,311.15. *AMCOM officials need to determine whether it is more cost-effective to use some of the excess new motors in inventory versus reworking older motors that are sent to the depot for repair.* [Recommendation A.3.b]

Figure 6 shows the direct current motor, which is used on the Chinook helicopter, in storage at the Defense Distribution Depot Corpus Christi, Texas.

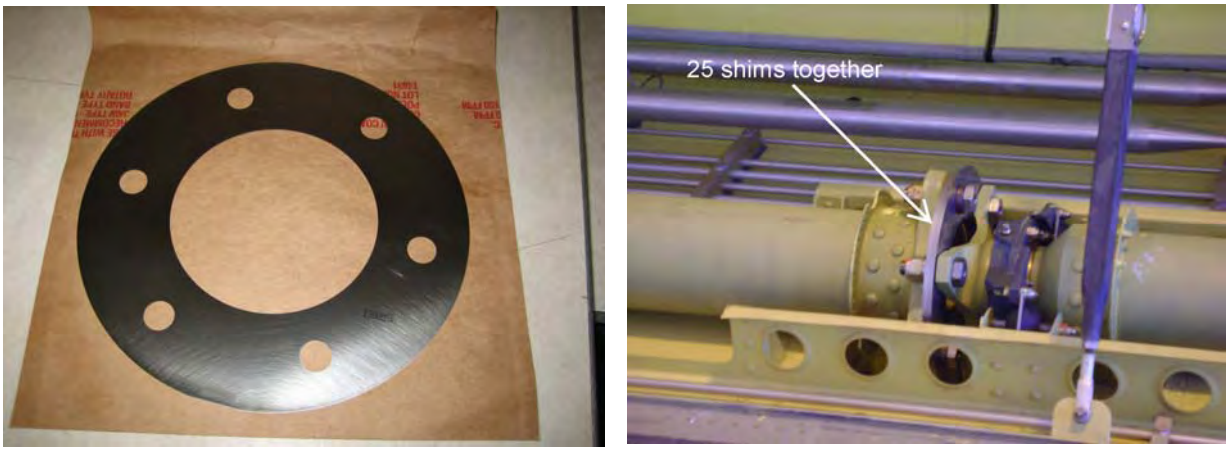
Figure 6. Sample 276 – Direct Current Motor

Sample 290 – Shim (NSN 5365-00-859-6162)

AMCOM officials procured individually wrapped shims, which are used on the Chinook helicopter. However, to more effectively meet requirements, AMCOM officials began procuring the shims in packages of 25. According to DLA data, only one shim is used per year. As of September 2010, DLA had 17,591 of the individually wrapped shims in inventory, valued at $282,687, or a unit price of $16.07. Boeing officials stated that it had 865 of the individually wrapped shims and 115 of the packages of 25 shims in inventory. It also had 354 more of the packages of 25 shims due in. *AMCOM officials need to develop a plan to use and/or repackage the shims in DLA inventory to meet current requirements and consume the $282,687 of excess inventory.* [Recommendation A.3.c]

Figure 7 shows the shim. The first picture is a shim from a package of 1, and the second picture is a package of 25 shims on the aircraft.

Figure 7. Sample 290 – Shim



Source: Defense Distribution Depot Corpus Christi, Texas

Management Comments on the Finding and Our Response

Department of the Army Comments

The Commander, AMCOM, stated that the AMCOM Integrated Materiel Management Center performed a detailed review of inventory available to support the Apache and Chinook platforms at CCAD and identified an estimated value of AMCOM and DLA excess inventory of $72.2 million versus the DoD IG estimate. The Commander stated that only seven of the Apache items, valued at $108,446, would be offered to CCAD for consumption before purchasing stock from Boeing. He stated that the other Apache items were not considered to be in an excess position and would be consumed by non-partnership demands. The Commander also stated that excess AMCOM-managed inventory for the Chinook was estimated at $62.7 million and that excess DLA inventory specific to CCAD support for the Chinook was $7.9 million.

Our Response

We disagree with the AMCOM calculations of total excess DoD inventory. We met with AMCOM Integrated Materiel Management Center representatives on numerous occasions and provided detailed worksheets of our calculations of excess inventory. As stated in Appendix A of the report, we used data provided by AMCOM Integrated Materiel Management Center and Boeing representatives as the starting point for our excess inventory calculations for the Army-managed items. We stand by our calculations. Additionally, our calculations of excess inventory were based on the contract price to procure the items from Boeing versus the current Federal Logistics Information System inventory value, which makes a difference in the value of the inventory. We believe our calculations in the report are conservative.

After receiving the Commander's comments on the draft of this report, we requested that AMCOM provide its basis for the inventory value in the Commander's comments. Based on

the data provided, Apache representatives did not consider DLA inventory levels in their calculations of excess inventory. Although Chinook representatives appear to have considered inventory of DLA-managed items, the data were not complete because DLA personnel calculated inventory requirements based on the Army's share of the annual demand for each part. This approach is flawed because DLA personnel calculated the Army's share of the CITs as zero because the Army had never procured any of these parts from DLA.

We obtained updated inventory data from the DoD EMALL for the NSNs on the follow-on CCAD/Boeing contract on March 15, 2011. The DLA inventory value had increased since we last checked the DoD EMALL in September 2010 (see Table 4). Specifically, for parts with either no demand or greater than 5 years of demand, DLA inventory had increased from $102.3 million ($157.0 million at the contract price) to $139.6 million ($200.0 million at the contract price). As shown in Table 5, for just the parts with more than 15 years of demand, DLA has $145.0 million of inventory at the contract price and only $4.0 million of requirements for those parts, while CCAD has $29.0 million of requirements. The Army must address this issue.

Table 5. Excess DLA Inventory for CCAD Requirements as of March 15, 2011
(in millions)

		Total DLA Inventory Value		**Annual Requirements at Contract Price**	
Years to Buy	**Number of NSNs**	**DLA Standard Unit Price**	**Contract Price[1]**	**DLA[1,2]**	**CCAD[3]**
No demand	430	$ 7.7	$ 12.8	$ 0.0	$ 7.9
>15	712	102.2	145.0	4.0	29.0
> 5 to 15	542	29.7	42.2	4.9	13.6
Subtotal	**1,684**	**$139.6[4]**	**$200.0**	**$ 8.9**	**$50.6[5]**
< 5	1,427	44.9	86.4	80.3	28.1
No inventory or not in DoD EMALL	878	N/A	N/A	N/A	N/A
Total	**3,989**	**$184.5**	**$286.4**	**$89.2**	**$78.7**

[1] We used the 2011 unit price or first available subsequent year price to calculate contract price and DLA requirements values. In addition, 298 NSNs were valued at 0 because no unit price was available or the unit of issue was not comparable.
[2] Includes any CCAD requirements requisitioned through DLA.
[3] We used the 2011 contract requirement and unit price or the first available subsequent year requirement and price to calculate CCAD requirement value. In addition, 274 NSNs were valued at 0 because no unit price or contract requirement was available.
[4] We compared our audit sample items to the excess DLA inventory and about half of the excess DLA inventory ($67.5 million) is related to parts that the Army transferred to DLA as part of the BRAC 2005 CIT requirements. There is an additional $18.0 million of contract due-in parts not included in our inventory on hand calculation.
[5] Subtotal does not add due to rounding.

As a result of this audit, the Office of the Secretary of Defense and the Department of the Army issued policy memoranda addressing the use of existing inventories (Army- and DLA-managed items) before procuring items from commercial supply sources. However, we have concerns that AMCOM officials will address the extent of the inventory issue. Therefore, we will closely monitor the situation over the years until it has been resolved. We will provide a quarterly report of DoD EMALL inventory levels for parts on the follow-on CCAD/Boeing contract to show progress that AMCOM has made in drawing down the excess inventory. We will send a copy of the quarterly report to the Office of the Secretary of Defense and Department of the Army officials addressed in this report.

Recommendations, Management Comments, and Our Response

A.1. We recommend that the Commander, Army Materiel Command, and the Director, Defense Logistics Agency, establish a team consisting of representatives from the Aviation and Missile Life Cycle Management Command, Defense Logistics Agency Aviation, Corpus Christi Army Depot, and Boeing to develop a plan to drawdown excess DoD inventory that could be used to meet Corpus Christi Army Depot requirements. Additionally, provisioning conferences should be held at least annually to revisit the excess inventory situation until it is resolved.

Department of the Army Comments

The Executive Deputy to the Commanding General, AMC, agreed but stated that the recommendation should be redirected to Headquarters, Department of the Army, Deputy Chief of Staff, G-4 (Logistics), as the lead agency to handle Army policy and regulations. The Executive Deputy stated that AMC will participate in all teams formed and will monitor the drawdown of excess inventory during the quarterly due diligence reviews chaired at the senior executive level. The Executive Deputy also stated that memoranda recently released by the Office of the Secretary of Defense and the Assistant Secretary of the Army for Acquisition, Logistics, and Technology should satisfy all future requirements to use Government-owned inventory as the first look.

Defense Logistics Agency Comments

The Executive Director, Material Policy, Process, and Assessment, DLA, agreed.

Our Response

The Executive Deputy to the Commanding General, AMC, and the Executive Director, Material Policy, Process, and Assessment, DLA, are responsive. Although they did not provide a detailed action plan, the Commander, AMCOM, provided a detailed plan in response to Recommendation A.3.a that meets the intent of this recommendation. Therefore, we did not redirect the recommendation, and no further comments are required.

A.2. We recommend that the Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness):

a. Develop an equitable plan to use the consumable items transferred to Defense Logistics Agency Aviation under the 2005 Base Realignment and Closure

recommendations that do not have sufficient demand outside the Corpus Christi Army Depot contract with Boeing.

Assistant Secretary of Defense (Logistics and Materiel Readiness) Comments

The Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness) agreed. The Principal Deputy stated that he issued a memorandum to the Military Departments and DLA on December 20, 2010, (see Office of the Assistant Secretary of Defense [Logistics and Materiel Readiness] comments in the Management Comments section of this report) addressing the use of on hand and due-in Government inventory on performance-based logistics and partnering arrangements. Therefore, he stated that no additional plan is required.

Our Response

The Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness) comments are partially responsive. The December 20, 2010, memorandum states that it should be standard practice to use on hand and due-in Government inventory on all performance-based logistics and partnering agreements. The memorandum also states that when commercial sources are used for performance-based logistics arrangements, inventory levels and forecasting need to be appropriately adjusted to meet changes in demand. Further, in the memorandum, the Principal Deputy stated that he is currently strengthening policy to emphasize the use of Government-owned inventory before procuring contractor-owned inventory. However, his comments did not address an equitable plan to use the $91.3 million of consumable items that AMCOM officials transferred at no cost to DLA Aviation in August 2008 to ensure the Army does not pay for these items again. Because the items were transferred to DLA at no cost, we do not believe it is appropriate for the Army to pay DLA for these items when DLA is not going to support the items in the future. Therefore, we request that the Principal Deputy provide additional comments in response to the final report.

b. Develop and issue policy and procedures that:

(1) Instruct the Services not to transfer consumable items to the Defense Logistics Agency when demand requirements are going to be met under contractor logistics support or performance-based logistics contracts managed by the Services.

Assistant Secretary of Defense (Logistics and Materiel Readiness) Comments

The Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness) partially agreed. The Principal Deputy stated that policy addressing the transfer of consumable items already exists in DoD Manual 4140.26-M, volume 2, "The DoD Integrated Materiel Management (IMM) for Consumable Items: Item Management Coding (IMC) Criteria." He also stated that the policy states that consumable items that have been included in a performance-based life-cycle product support can be retained by the Military Departments' contractor or agent.

Our Response

Although the Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness) partially agreed, his comments are responsive. No further comments are required.

(2) Require the Services to use the DoD EMALL to determine whether the Defense Logistics Agency has excess inventory for all consumable items being procured from sources other than the Defense Logistics Agency under either contractor logistics support or performance-based logistics sustainment strategies, quantify the excess inventory, and develop a plan to use any excess inventory.

Assistant Secretary of Defense (Logistics and Materiel Readiness) Comments

The Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness) disagreed. The Principal Deputy stated that the DoD EMALL is a tool that can be used to identify quantities and prices of DLA consumable inventory, but it is not a tool to identify excess inventory, because excess inventory levels are based on demand at a given time. He stated that DoD policy requires that Military Service program managers collaborate with Military Service and DLA materiel managers and invite their participation in developing and selecting performance-based materiel support strategies. He stated that this process should also be used to assess the best inventory strategy, and his office would reinforce the guidance.

Our Response

The Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness) comments are partially responsive. The Principal Deputy stated that his office would reinforce DoD policy requiring Military Service program managers to collaborate with Military Service and DLA materiel managers to assess inventory strategies. We believe collaboration is a good practice, and that the DoD EMALL could and should be used to identify existing inventory before procuring from contractors. We plan to conduct additional audits in this area; therefore, we are not requesting the Principal Deputy to provide additional comments in response to the final report.

A.3. We recommend that the Commander, Army Aviation and Missile Life Cycle Management Command:

a. Determine and assign responsibility for managing consumable item requirements to meet Corpus Christi Army Depot demands and, if Boeing is assigned responsibility, instruct the contracting officer to hold Boeing accountable through contract terms, conditions, and appropriate metrics for eliminating the excess DoD inventory.

Department of the Army Comments

The Commander, AMCOM, agreed, stating that a memorandum of agreement is currently being developed between the AMCOM Integrated Materiel Management Center, CCAD, DLA, and Boeing. He also stated that the memorandum will require DLA to set aside available inventory for use on the partnership contract to effectively execute the requirement.

He further stated that the memorandum will ensure that Government inventory is used as a first priority, and the contract will be modified to reflect the use of applicable Government-furnished inventory. The Commander stated that inventory management is at the Government's discretion; therefore, Boeing will be directed to utilize Government inventory and excess inventory will be appropriately managed under this contract. The Commander also stated that the follow-on contract requires Boeing to use DLA as the preferred supplier for DLA-managed items that are determined to be the best value to the Government in terms of price, delivery, and quality. The Commander planned to execute the memorandum of agreement by March 31, 2011.

Our Response

The Commander, AMCOM, comments are responsive. However, as of the date of this report, the Commander had not executed the memorandum of agreement. We request that the Commander, AMCOM, provide us with a copy when issued.

b. Determine whether it is more cost-effective to use some of the 653 excess new direct current motors in inventory (national stock number 6105-01-120-4285), valued at $573,236, versus reworking motors sent to the Corpus Christi Army Depot for repair.

Department of the Army Comments

The Commander, AMCOM, agreed. The Commander stated that he queried CCAD to identify the cost of reworking the motors. He stated that if it is cost-effective, AMCOM will use the motors in its inventory to meet FY 2012 and part of FY 2013 requirements. He also stated that using current workload projections, the AMCOM inventory would be depleted during FY 2013.

Our Response

The Commander, AMCOM, comments are responsive. No further comments are required.

c. Develop a plan to use and/or repackage the shims (national stock number 5365-00-859-6162) in Defense Logistics Agency inventory, valued at $282,687, to meet current Corpus Christi Army Depot requirements.

Department of the Army Comments

The Commander, AMCOM, agreed. The Commander stated that if it is cost-effective, AMCOM will use the shims in DLA inventory to meet FY 2012 and part of FY 2013 requirements. He also stated that using current workload projections, the DLA inventory would be depleted during FY 2013.

Our Response

The Commander, AMCOM, comments are responsive. No further comments are required.

Finding B. Spare Parts Pricing Problems

AMCOM officials did not effectively negotiate fair and reasonable prices for noncompetitive spare parts procured on the CCAD/Boeing contract. We reviewed costs for 24 high-dollar parts valued at about $34.0 million and identified serious pricing problems with 18 of the parts valued at about $23 million. These pricing problems occurred because neither the Army[13] nor Boeing officials performed adequate cost or price analyses to establish the reasonableness of the proposed subcontract prices that were used to support negotiated prices. The following pricing problems also occurred because Boeing officials routinely proposed, and AMCOM officials accepted, egregiously deficient cost or pricing data based on unrealistically low quantities that had no relationship to the quantities required or the actual price Boeing negotiated with its subcontractors.

- Boeing furnished data to support prices based on dealer quotes, commercial catalog prices for quantities of one, outdated historical data for quantities of one, and competitive commercial quotes for quantities of one to three.

- Boeing furnished certified cost or pricing data that were not complete, accurate, and current at the time of the material certification cutoff date (seven parts).

- Boeing routinely negotiated significantly lower prices with its suppliers shortly after negotiating prices with AMCOM officials and did not share range pricing/quantity discounts with the Army when procurement quantities were increased or when Boeing combined buys, resulting in lower unit prices (seven parts).

- Two parts were priced incorrectly on the follow-on contract, and two other parts were switched from "buy" (purchased parts) to "make" (Boeing manufactured) at significantly higher prices without adequate justification (four parts).

As a result, we calculated that Boeing charged the Army about $13 million (131.5 percent) more than the fair and reasonable prices for the 18 parts[14] ($23 million versus $10 million). Costs for six parts valued at $11.3 million were in line with negotiated prices. During the audit, Boeing provided the Army a credit of $324,616 for one of the incorrectly priced parts. If pricing problems are not addressed, the Army could experience similar overpricing issues on the follow-on CCAD/Boeing contract. Additionally, several potential nonconforming parts were brought to our attention that need to be addressed.

Guidance

Federal Acquisition Regulation (FAR) 15.403-4, "Requiring Certified Cost or Pricing Data," (section 2306a, title 10, United States Code [10 U.S.C. § 2306a] and 41 U.S.C. § 254b) establishes the threshold for obtaining certified cost or pricing data at $700,000 unless an

[13] The Director Aviation Logistics, AMCOM Contracting Center, stated that a cost/price analysis team is being developed to assist AMCOM in contract negotiations.
[14] Includes two parts priced incorrectly on the follow-on contract.

exception applies. Government contractors are required to submit cost or pricing data and certify that such data are accurate, complete, and current upon agreement on price. If it is determined that the contract price was increased because the contractor submitted defective cost or pricing data and the Government relied on the data submitted, a downward adjustment to the contract price, including profit or fee, is required. The legislative intent was to give the Government informational parity with contractors and subcontractors during price negotiations so the Government could avoid excessive prices. The AMCOM contracting officer obtained certified data from Boeing for several phases of the CCAD/Boeing contract as additional parts were added to the contract. According to Boeing officials, Boeing generally did not re-certify those parts that were already on contract.

FAR 15.406-2, "Certificate of Current Cost or Pricing Data," states:

> (b) The certificate does not constitute a representation as to the accuracy of the contractor's judgment on the estimate of future costs or projections. It applies to the data upon which the judgment or estimate was based. . . . **If the contractor had information reasonably available at the time of agreement showing that the negotiated price was not based on accurate, complete, and current data, the contractor's responsibility is not limited by any lack of personal knowledge of the information on the part of its negotiators. [emphasis added]**

The section also states that "data should be updated by the contractor to the latest closing or cutoff dates for which data are available." Note 1 to FAR Table 15-2, "Instructions For Submitting Cost/Price Proposals When Cost or Pricing Data Are Required," states:

> As later information comes into your [contractor] possession, it should be submitted promptly to the Contracting Officer in a manner that clearly shows how the information relates to the offeror's price proposal.

FAR clause 52.215-10, "Price Reduction for Defective Certified Cost or Pricing Data," was incorporated into the contract and requires a price reduction if the contractor or subcontractor furnished certified cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data.

FAR 15.404-3, "Subcontract pricing considerations," requires contracting officers to determine price reasonableness for the prime contract, including subcontracting costs. Further, the prime contractor must evaluate subcontractor prices to establish price reasonableness as part of the prime contract proposal. Specifically, it states:

> (a) The contracting officer is responsible for the determination of price reasonableness for the prime contract, including subcontracting costs. The contracting officer should consider whether a contractor or subcontractor has an approved purchasing system, **has performed cost or price analysis of proposed subcontractor prices, or has negotiated the subcontract prices before negotiation of the prime contract**, in determining the reasonableness of the prime contract price. **This does not relieve the contracting officer from the responsibility to analyze the contractor's submission, including the subcontractor's cost or pricing data**. **[emphasis added]**

Contractor Purchasing System Reviews

FAR 44.3, "Contractors' Purchasing System Reviews," permits the administrative contracting officer to perform contractor purchasing system reviews to evaluate the efficiency and effectiveness with which the contractor spends Government funds and complies with Government policy when subcontracting. DCAA and the Defense Contract Management Agency (DCMA) conducted reviews of the Boeing purchasing systems at the Mesa, Arizona, and Philadelphia, Pennsylvania, locations.

Boeing Mesa Purchasing System Review

The DCAA Arizona Branch conducted an audit of the McDonnell Douglas Helicopter Co.[15] purchasing system to determine corrective actions as of August 31, 2007, for deficiencies that it had previously identified on April 28, 2006.[16] The DCAA Arizona Branch reported on three specific conditions that were similar to the issues we identified on the CCAD/Boeing contract that are discussed in the, "Spare Parts Pricing Problems for Sample Parts," section.

In April 2006, the DCAA Arizona Branch found that Boeing had not been completing subcontractor price cost analyses until after the prime contract had been negotiated. Specifically, it found that Boeing completed only 20 percent of the price cost analyses on time. In November 2007, the DCAA Arizona Branch reported that Boeing made significant progress in conducting price cost analyses on time but continued to come to negotiations with tens of millions of dollars unsupported by price cost analyses. The DCAA Arizona Branch also reported that Boeing purchased direct material using combined buys, resulting in lower unit prices than it proposed, but did not disclose this information to the Government during contract negotiations. In addition, the DCAA Arizona Branch reported that Boeing did not always use valid purchasing agreements with suppliers to price its contract proposals.

Boeing had not been completing subcontractor price cost analyses until after the prime contract had been negotiated.

Boeing Philadelphia Purchasing System Review

On December 15, 2006, DCMA-Boeing Philadelphia issued a report on its review of the Boeing Integrated Defense Systems Rotorcraft Systems Division purchasing system.[17] DCMA-Boeing Philadelphia reported that for the sample reviewed, Boeing effectively accomplished price and cost analyses 92 percent of the time, and the deficient cases were isolated instances of noncompliance. DCMA-Boeing Philadelphia approved the site's purchasing system as a result of its 2006 review. However, we discussed the report with the DCMA-Boeing Philadelphia Divisional Administrative Contracting Officer, who stated that the DCMA team only reviewed the percentage of price and cost analyses that were

[15] McDonnell Douglas Helicopter Co. is an indirect subsidiary of Boeing.
[16] DCAA Report No. 3901-2007R12030001, "Report on CPSR [Contractor Purchasing System Review] Follow-up," November 13, 2007.
[17] DCMA Case No. P-06-01, "Contractor Purchasing System Review," December 15, 2006.

completed before the award of the subcontract, not before prime contract negotiations with the Government. The review team did not identify whether price and cost analyses were effectively accomplished before contract negotiations; but the DCMA contracting officer stated that sometimes Boeing completed the cost and price analyses before negotiations, and sometimes Boeing completed them after negotiations.[18]

FAR 15.404-3 requires the contracting officer to consider whether the prime contractor has performed cost or price analyses of proposed subcontractor prices and negotiated subcontractor prices before negotiating the prime contract. As we discuss further in this finding, the majority of the pricing errors we identified were for parts on the Chinook helicopter, which was manufactured at Boeing's Philadelphia facility. The pricing errors we identified were contradictory to the results of the DCMA-Boeing Philadelphia purchasing system review. Based on the results of this audit, the DCMA Contractor Purchasing System Review Division Director should ensure that purchasing system reviews determine whether cost and price analyses are being done before negotiations with the Government and whether quantity discounts are adequately passed on to the Government.

The Contractor Purchasing System Review Division Director should identify the purchasing system at Boeing Philadelphia as high risk and schedule a purchasing system review to determine whether Boeing conducts subcontractor price and cost analyses before prime contract negotiations and whether quantity discounts are being adequately passed on to the Government. [Recommendation B.1]

Inadequate Subcontractor Cost or Price Analysis

In addition, FAR 15.404-3 requires the prime contractor to conduct appropriate cost or price analyses to establish the reasonableness of proposed subcontract prices and include the results of those analyses in the price proposal. Based on data reported by the DCAA Arizona Branch and the DCAA Southern New Jersey Branch in reports on the audits of the CCAD bill of materials, Boeing did not complete all of the required cost or price analyses before negotiating the CCAD/Boeing contract with the Army.

The DCAA Southern New Jersey Branch examined the Phase II bill of materials in October 2004[19] and determined that the proposed bill of material was acceptable for negotiation of a fair and reasonable price. However, the report stated that as of September 29, 2004, Boeing had not completed the required cost analyses for nine subcontractors. Four of the nine subcontractors (The Timken Corporation [Timken], Smiths Aerospace, LLC [Smiths Aerospace], The Purdy Corporation [Purdy], and The Goodrich Corporation [Goodrich]) were the same suppliers for parts for which we questioned the

[18] In an August 11, 2009, Commission on Wartime Contracting in Iraq and Afghanistan, Hearing on Contractor Business Systems, the Director of Contract Business Operations, DCMA, stated that the DCMA workforce conducting contractor purchasing system reviews had been downsized by 86 percent, from 102 to 14 personnel. Additionally, the Commission stated that during contractor purchasing system reviews, DCMA identified exceptions about 4 percent of the time, while DCAA identified problems 50 percent of the time; a troubling difference between the two agencies.

[19] DCAA Report No. 6341-2004D22000006, "Report on Examination of Corpus Christi Army Depot Phase II Bill of Material," October 13, 2004.

contract price on the CCAD/Boeing contract. The DCAA Southern New Jersey Branch also examined the Phase III bill of materials in January 2006.[20] The report stated that the proposal was acceptable for negotiation of a fair and reasonable price but Boeing had not completed the required cost analyses for four subcontractors. One of the four subcontractors (Goodrich) was the supplier for a part that we questioned the price of on the contract.

Also, in the October 2004 review of the Phase II CCAD bill of materials, the DCAA Southern New Jersey Branch reported that the estimating system and internal control policies and procedures at Boeing Philadelphia were inadequate in part. Specifically, a certain significant deficiency in the estimating system could result in higher proposal costs. In the January 2006 review of the Phase III bill of materials, the DCAA Southern New Jersey Branch reported that the estimating system was adequate.

The DCAA Arizona Branch February 2005 report on the Phase II bill of materials[21] also identified unsupported costs related to Boeing officials not obtaining and performing cost analyses of cost or pricing data from subcontractors for material exceeding the FAR threshold for the submission of cost or pricing data. The report for the Phase III bill of materials[22] was silent on subcontractor cost or price analyses. Further, DCAA Arizona Branch also stated that Boeing's material estimating system (MES) was inadequate in part for ensuring that proposals and final certified contract prices were based on accurate, complete, and current cost or pricing data. Specifically, one of the issues identified was the timeliness of analyses of subcontract proposals.

In the December 2006 the DCAA Arizona Branch Office reviewed the Phase III bill of materials. In its report, the DCAA Arizona Branch noted that in February 2006 the Boeing McDonnell Douglas Helicopter Co.'s estimating system did not incorporate cost reductions received for quantity discounts in proposed direct material costs based on range pricing agreements as a result of combining known multiple contract requirements. This resulted in increased prices for proposed direct materials in forward pricing proposals.

No Subcontractor DCAA Assist Audits

FAR 15.404-2, "Information to support proposal analysis," states that the contracting officer should request field pricing assistance when the information available at the buying activity is inadequate to determine a fair and reasonable price. The Defense Federal Acquisition Regulation Supplement Procedure, Guidance, and Information 215.404-2, "Information to support proposal analysis," states that the contracting officer should consider requesting field pricing assistance for fixed-price proposals exceeding the cost or pricing data threshold. Based on the DCAA Southern New Jersey Branch report on the proposed CCAD bill of materials, the contracting officer did not request assist audits.

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[20] DCAA Report No. 6341-2006D27000004, "Report on Audit of the Direct Material Portion for the Corpus Christi Army Depot Phase 3 Spares Proposal," January 24, 2006.
[21] DCAA Report No. 3901-2004R22000014, "Report on Audit of Definitization of CCAD Phase II, Proposal RE 17972," February 8, 2005.
[22] DCAA Report No. 3901-2006R22000003, "Report on Audit of CCAD Phase III Proposal Boeing Proposal Number 30597," December 6, 2006.

In the October 2004 audit of the Phase II bill of materials, the DCAA Southern New Jersey Branch report stated that the contracting officer instructed the DCAA auditors not to request necessary assist audits of major subcontractors because the assist audits would not be completed in time to incorporate into the report due to the accelerated negotiation schedule. However, DCAA Southern New Jersey Branch officials stated that the results of the assist audits are considered essential to the conclusion of the examination and qualified the audit results to the extent that additional costs may have been questioned based on the results of the audit assist reports. The DCAA Southern New Jersey Branch also qualified its report on the Phase III bill of materials, stating that they requested assist audits from other cognizant DCAA field offices for the proposed material costs but did not receive any results in time for incorporation in the report. Both DCAA Arizona Branch audit reports were silent on assist audits.

Proposed Follow-On CCAD/Boeing Contract Is Not Acceptable for the Negotiation of a Fair and Reasonable Price

The DCAA Southern New Jersey Branch also conducted a review of the proposed follow-on contract bill of materials in December 2009.[23] The DCAA Southern New Jersey Branch reported that Boeing did not provide adequate support for proposed strategic agreements and actual excess current contract costs. In addition, the DCAA Southern New Jersey Branch reported that Boeing did not complete its cost analyses of subcontract proposals for eight of the nine subcontract proposals. Therefore, the report determined that the consolidated bill of materials was not acceptable for the negotiation of a fair and reasonable price. The DCAA Arizona Branch completed its review of the proposed follow-on contract bill of materials in July 2010.[24] The DCAA Arizona Branch reported that Boeing did not provide adequate supporting documentation for various proposed costs. The DCAA Arizona Branch considered the cost or pricing data inadequacies to have a significant impact on the proposal and determined that the proposal was not an acceptable basis for negotiation of a fair and reasonable price.

Spare Parts Pricing Problems for Sampled Parts

Boeing was providing cost or pricing data based on unrealistically low quantities such as dealer quotes, commercial catalog prices for quantities of one, outdated historical data for quantities of one, and competitive commercial quotes for quantities of one to three that had no relationship to the quantities required or the actual price Boeing negotiated with its subcontractors. Boeing also furnished certified cost or pricing data that were not complete, accurate, and current at the time of the material certification cutoff date and routinely negotiated significantly lower prices with its suppliers shortly after negotiating prices with AMCOM officials. Boeing also did not share range pricing/quantity discounts with the Army when procurement quantities were increased or when Boeing combined buys, resulting in lower unit prices. Also, two parts were switched from buy (purchased parts) to make (Boeing manufactured) at significantly higher prices without adequate justification.

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[23] DCAA Report No. 6341-2010D27000001, "Report on Audit of Firm Fixed Price Proposal for the Consolidated Bill of Material Part of the CCAD Partnership Follow-on Proposal," December 17, 2009.
[24] DCAA Report No. 4301-2009R21000050, "Report on Audit of the Corpus Christi Army Depot Overhaul, Repair, and Recapitalization of AH-64 Weapon System Components," July 8, 2010.

Additionally, it appears that the AMCOM contracting officer relied on DCAA to conduct audits of the material prices in Boeing's proposal for the partnership contract, but there is no evidence that the contracting officer conducted a part-by-part review of the contract bill of materials to determine the price reasonableness of specific parts. Finally, without support from an experienced cost/price analysis group, the AMCOM contracting officer will have difficulty negotiating a firm-fixed-price contract that adequately protects the Government's interests.

To calculate the DoD Inspector General (IG) fair and reasonable price, we reviewed Boeing costs and applied a 34 percent addon or wrap rate to reach the burdened Boeing price. The wrap rate includes Boeing's costs of doing business such as overhead, general and administrative costs, and the negotiated profit rate. Table 6 shows a summary of the pricing problems for 18 of the 24 parts we reviewed. Each category of pricing problems is discussed in detail following the summary table.

Table 6. Pricing Problems for 18 of 24 Parts Reviewed

Category	Number of Sample Parts	Contract Price for Parts Procured	IG Fair and Reasonable Price	Difference	
				Amount Boeing Needs to Refund	Percent
Defective Data	7	$ 2,247,392	$ 671,873	$ 1,575,519	234.5
Pass-Through Part[1]	1	629,291	235,725	393,566	167.0
Price Incorrect for Follow-On Contract[1]	2	2,793,766	685,125	2,108,641	307.8
Boeing Negotiated Better Prices	7	13,777,838	7,751,809	6,026,029	77.7
Switch from Buy to Make	2	3,201,107	438,503	2,762,604	630.0
Subtotal[1]	**18**	**$22,649,393[2]**	**$ 9,783,035**	**$12,866,359[2]**	**131.5**
Prices In Line	6	11,334,911	11,555,646	(220,735)	(1.9)
Total[1]	**24**	**$33,984,305[2]**	**$21,338,681**	**$12,645,624**	**59.3**

[1] The price for the pass-through part is also incorrect on the follow-on contract. The same part is included in both categories; the part is not counted twice in subtotal or total.
[2] Totals do not add due to rounding.

Boeing Owes the Army Refunds for Defective Certified Cost or Pricing Data and Unnecessary Pass-Through Costs

Boeing had information that was reasonably available before the material certification cutoff dates that was not used to support CCAD/Boeing contract prices for seven parts valued at about $2.2 million. The correct price should have been $671,873; a difference of about $1.6 million or 234.5 percent that Boeing needs to refund to the Army. During the audit, Boeing issued a refund of $324,616 for sample 110 that was in line with our calculations.

Sample 45 was a pass-through part that should have been procured by Boeing from the original equipment manufacturer (OEM), not as a commercial catalog part from another supplier. We calculated that the Army paid $393,566, or 167.0 percent, too much because Boeing did not procure the part from the OEM. Boeing needs to pursue a refund for this part from the dealer. We also found that the proposed prices on the follow-on contract for sample 45 and 415 were overpriced by about $2.1 million because of the pass-through issue and Boeing not using current data to price the parts. The proposed prices on the follow-on contract need to be corrected for these two parts. Boeing needs to provide the Army refunds for defective data and excessive pass-through costs and needs to correct the prices on the follow-on contract for the parts in Table 7.

Table 7. Parts for Which Boeing Needs to Provide a Refund to the Army and Correct Prices on the Follow-On CCAD/Boeing Contract

Sample Number	NSN	Contract Price for Parts Procured	IG Fair and Reasonable Price	Difference		Boeing Refund[1]
				Amount	Percent	
Certified Cost or Pricing Data Were Not Complete, Accurate, and Current						
5	1680002451833	$ 563,418	$ 212,825	$ 350,593	164.7	**$ 376,635**
91	3020005662521	618,124	69,475	548,649	789.7	**556,006**
110	5307011634676	566,073	233,224	332,848[2]	142.7	**324,616**
356	3120008341507	140,724	63,821	76,902[2]	120.5	
371	3120008666099	173,626	16,423	157,202[2]	957.2	**159,164**
376	1650009559588	104,104	74,227	29,877	40.3	
398	1560004094101	81,324	1,876	79,448	4,235.0	**76,849**
Subtotal		**$2,247,392[2]**	**$ 671,873[2]**	**$1,575,519**	**234.5**	**$1,493,270**
Pass-Through Part Where Commercial Catalog Price for 1 Part Was Used						
45	1650008341430	629,291	235,725	393,566	167.0	Pending
Subtotal		**$ 629,291**	**$ 235,725**	**$ 393,566**	**167.0**	
Price Not Correct for Follow-on Contract Proposal						
45	1650008341430	$2,664,518	$ 682,789	$1,981,729	290.2	N/A
415	3110011369793	129,248	2,336	126,912	5,433.8	N/A
Subtotal		**$2,793,766**	**$ 685,125**	**$2,108,641**	**307.8**	
Total		**$5,670,448[2]**	**$1,592,722[2]**	**$4,077,726**	**256.0**	**$1,493,270**

[1] After we issued the draft report, Boeing provided the Army refunds for samples 5, 91, 371, and 398, and stated that it was pursuing a refund for sample 45.
[2] Totals do not add due to rounding.

The AMCOM Contracting Officer needs to obtain refunds from Boeing for parts priced with defective data ($1,575,519, less refunds already processed) and unnecessary pass-through costs ($393,566) and needs to correct prices on the follow-on contract ($2,108,641). [Recommendation B.2.a] The following section includes detailed information for most of the sample numbers in Table 7. See Appendix C for information on sample 356 and 376. For our calculation of the cost impact, see Appendix E.

Sample 5 – Linear Electro Mechanical Actuator (NSN 1680-00-245-1833) *(Quantity Issue – Better Data Available Before Material Certification Cutoff Date)*

The Boeing proposed price was based on what Boeing identified as a "firm" range pricing quote from Goodrich with quantities of one each at $51,149.00 (2005) and eight each at $18,175.00 (2006). However, in June 2005, Boeing issued two purchase orders (PO) to Goodrich–one on June 2, 2005, for 8 parts at a unit price of $6,293.00 (PO 2002115) and one on June 10, 2005, for 239 parts at a unit price of $6,355.00 (PO 2002836). Boeing awarded both POs before the material certification cutoff of June 30, 2005. Consequently, AMCOM officials paid Boeing $22,101.31 to $23,093.82 for a part that Boeing purchased for only $6,293.00 to $6,355.00. We calculated that AMCOM officials paid Boeing $563,418 for the 25 electro mechanical actuators procured when it should have paid only $212,825; a difference of $350,593 (164.7 percent). Figure 8 shows the range pricing quote that Boeing used to support its proposed prices, and Table 8 shows the pricing information.

Figure 8. Sample 5 – Range Pricing "Firm" Quote Data from Goodrich

Part Number	Quantity	2005	2006	2007	2008	2009
AL2432M3-1	1-5	51,149	52,682	54,256	55,882	56,817
	6-10	17,649	18,175	18,713	19,274	19,572
	11-25	13,602	14,006	14,419	14,850	15,071
	26-50	10,435	10,743	11,059	11,390	11,550
	51-100	6,355	6,541	6,730	6,931	7,015
	101-250	5,526	5,687	5,851	6,026	6,093
	251-500	4,973	5,118	5,264	5,421	5,478
	501-550	4,803	4,943	5,084	5,236	5,289

Table 8. Sample 5 – Pricing Information for the Linear Electro Mechanical Actuator

	Date	Quantity	Unit Cost/Price	Percent Difference
Army Procurement (Simmonds Precision Products, Inc.)	8/25/2008	225	$ 5,350.00	
Boeing PO 2002115	6/2/2005	8	6,293.00	
Boeing PO 2002836	6/10/2005	239	6,355.00	
Burdened Boeing PO Price (Weighted Average)			**8,513.01**	
Phase IIA Material Certification Cutoff Date 6/30/2005				
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2005 (8/8/2005)	1/0	58,949.85	
	2006 (8/8/2005)	8/0	20,692.89	
	2007 (6/15/2007)	7/6	**22,101.31**	159.6
	2008 (6/15/2007)	34/16	**22,595.53**	165.4
	2009 (11/1/2007)	34/3	**23,093.82**	171.3
Proposed Follow-On Contract (2010-2014)	2/1/2010	Range 6-8/year	6,929.00 to 7,064.23	

Figure 9 shows the linear electromechanical actuator, which is used on the Chinook helicopter.

Figure 9. Sample 5 – Linear Electro Mechanical Actuator

Source: Defense Distribution Depot Red River, Texas

Sample 91 – Spur Gear (NSN 3020-00-566-2521) *(Quantity and Quote Issue – Better Data Available Before Material Certification Cutoff Date)*

AMCOM officials procured 991 spur gears from Boeing at a total price of $618,124 or a weighted average unit price of $623.74 from 2007 through 2009. Boeing used a catalog price list from Smiths Aerospace for support, with a quoted unit price of $459.46 based on a quantity of one. However, Boeing had two POs with better data available before the material certification date of April 24, 2007. Specifically, on July 18, 2006, Boeing purchased 305 parts at a $36.96 unit price (PO 2027793), and on December 19, 2006, it purchased 105 parts at a $96.93 unit price (PO 2036899). Additionally, DLA previously procured this part in November 2006 at a unit price of $8.72; 98.6 percent less than what AMCOM officials paid for the part under the CCAD/Boeing contract. We calculated that AMCOM officials paid Boeing $618,124 for the 991 spur gears procured when it should have paid only $69,475, or a difference of $548,649 (789.7 percent). Figure 10 shows the spur gear, which attaches to a motor used on the Chinook helicopter.

Figure 10. Sample 91 – Spur Gear and Attached to a Motor

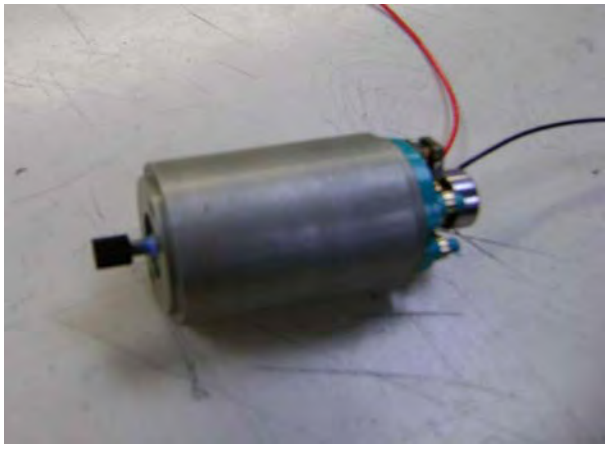

Table 9 shows the pricing information for the spur gear.

Table 9. Sample 91 – Pricing Information for the Spur Gear

	Date	Quantity	Unit Cost/Price	Percent Difference
DLA Procurement (Hoosier Industrial Supply, Inc.)	11/1/2006	371	$ 8.72	
DLA Standard Unit Price	FY 2009	ANY (343)	12.51	
Boeing PO 2027793	7/18/2006	305	36.96	
Boeing PO 2036899	12/19/2006	105	96.93	
Burdened Boeing PO Price (Weighted Average)			**70.11**	
Commercial Quote (Smiths Aerospace)	3/23/2007	1	459.46	
Phase IIB Material Certification Cutoff Date 4/24/2007				
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2007 (6/15/2007)	20/267	**595.91**	750.0
	2008 (6/15/2007)	615/267	**615.60**	778.0
	2009 (6/15/2007)	453/457	**644.75**	819.6
DCMA Review of Catalog Prices (2007-2009 Average)	3/20/2007		482.29	
Proposed Follow-On Contract (2010-2014)	2/1/2010	Range 444-468/year	42.65 to 145.03	

Sample 110 – Plain Stud (NSN 5307-01-163-4676) *(Pricing Error)*

Boeing proposed a unit price of $1,431.62, for 168 plain studs at a total price of $240,512 on May 22, 2008. However, when the part was added to the CCAD/Boeing contract on November 25, 2008, the parts were incorrectly priced at $3,369.48. AMCOM officials had previously procured the part for only $190.00 each. Boeing provided us with a purchase contract from GKN Aerospace North America, Inc., that supported the original proposed contract price. Further, the follow-on CCAD/Boeing contract proposed prices ranged from $80.33 to $309.02 in 2010 to 2014 and appear in line with the previous AMCOM price. During the audit, Boeing agreed that the part had been incorrectly priced, and on September 30, 2010, Boeing processed a credit to AMCOM for $324,616 that was in line with our calculated overpayment. No further action is required for this part.

On September 30, 2010, Boeing processed a credit to AMCOM for $324,616 that was in line with our calculated overpayment.

Table 10 shows the pricing information for the plain stud, which is used on the Apache helicopter.

Table 10. Sample 110 – Pricing Information for the Plain Stud

	Date	Quantity	Unit Cost/Price	Percent Difference
AMCOM Procurement (SPX Corporation)	2/21/2007	600	$ 190.00	
Burdened Boeing Purchase Contract (GKN Aerospace North America, Inc.)	6/18/2007	113	**1,388.24**	
Boeing Proposal	5/22/2008	168	1,431.62	
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2009 (11/25/2008)	168/168	**3,369.48**	142.7
Proposed Follow-On Contract (2010-2014)	2/1/2010	840 (168/year)	80.33 to 309.02	

Sample 371 – Sleeve Bushing (NSN 3120-00-866-6099) *(Quantity and MES Issue – Better Data Available Before Material Certification Cutoff Date)*

Officials from AMCOM and Boeing negotiated a total contract price of $207,822 for 617 sleeve bushings from 2005 through 2009, and the Army procured 530 sleeve bushings for $173,626; a weighted average unit price of $327.60. To support the contract price, Boeing used outdated historical data from its MES from 1991 through 1994 for low quantities of two to four parts. Boeing had a current PO, which was awarded on May 23, 2005, before the material certification cutoff date of June 30, 2005, that was not used for 434 parts at a unit price of $17.00 (PO 2001340). Using a weighted average cost that included four of the outdated POs and the May 23, 2005, PO, we calculated that the proposed unit price should have been $23.13 for a burdened Boeing contract price of $30.99 versus the weighted average unit price of $327.60 that Boeing charged the Army or a difference of 957.2 percent. DCAA Southern New Jersey Branch officials reviewed the outdated prices from the Boeing MES. Also, the historical price was considerably less than the contract price, as DLA procured this part in July 2007 for $6.30; 98.1 percent less than the weighted average contract price. We calculated that for the 530 parts procured, the fair and reasonable price was $16,423 versus the $173,626 that Boeing charged the Army, or a 957.2 percent difference. Boeing needs to refund AMCOM $157,202.

The fair and reasonable price was $16,423 versus the $173,626 that Boeing charged the Army, or a 957.2 percent difference.

Table 11 shows the pricing information and Figure 11 shows a picture of the sleeve bushing, which is used on the Chinook helicopter.

Table 11. Sample 371 – Pricing Information for the Sleeve Bushing

	Date	Quantity	Unit Cost/Price	Percent Difference
DLA Procurement (All Power Manufacturing Co., Inc.)	7/3/2007	255	$ 6.30	
DLA Standard Unit Price	FY 2010	ANY (123)	8.88	
DCAA Review of MES Averages (2005-2009 Average)*	10/13/2004		256.27	
Boeing PO 2001340	5/23/2005	434	17.00	
Burdened Boeing PO Price (Weighted Average)			**30.99**	
Phase IIA Material Certification Cutoff Date 6/30/2005				
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2005 (8/8/2005)	13/0	39.36	
	2006 (8/8/2005)	98/154	**271.02**	774.6
	2007 (6/15/2007)	130/168	**337.64**	989.6
	2008 (6/15/2007)	188/20	**355.35**	1,046.8
	2009 (6/15/2007)	188/188	**362.01**	1,068.2
Proposed Follow-On Contract (2010-2014)	2/1/2010	1,040 (208/year)	39.78 to 41.06	

* Unit prices were based on MES data from 1991 to 1994 for low quantities.

Figure 11. Sample 371 – Sleeve Bushing

Sample 398 – Ramp Gate Roller Assembly (NSN 1560-00-409-4101) *(Competitive Commercial Price Quote Issue – Better Data Available Before Material Certification Cutoff Date)*

Officials from AMCOM and Boeing negotiated a total contract price of $121,204 for 76 ramp gate roller assemblies from 2008 through 2009, and the Army procured 50 ramp

gate roller assemblies for a total price of $81,324; a weighted average unit price of $1,626.49. The negotiated price was supported by competitive commercial price quotes, as classified by Boeing, on December 14, 2005. The competitive commercial price quote was for a quantity range of one to three parts at a 2008 unit price of $1,198.00 and a 2009 unit price of $1,318.00. Boeing previously purchased the part less than 5 months earlier at a unit price of only $28.00, and this information was available before the material certification cutoff date of June 1, 2006. In addition, the 2009 CCAD/Boeing contract unit price of $1,678.61 was more than 16,000 percent more than the DLA standard unit price of $10.25. We calculated that the Army paid Boeing $81,324 for the 50 ramp gate roller assemblies actually procured when they should have paid $1,876; a difference of $79,448 (4,235.0 percent). During meetings with Boeing in September 2010, Boeing agreed to provide the Army a credit for this part. Table 12 shows the pricing information for the ramp gate roller assembly.

The 2009 CCAD/Boeing contract unit price of $1,678.61 was more than 16,000 percent more than the DLA standard unit price of $10.25.

Table 12. Sample 398 – Pricing Information for the Ramp Gate Roller Assembly

	Date	Quantity	Unit Cost/Price	Percent Difference
DLA Procurement (Ace Aviation Service, Inc.)	8/4/2008	270	$ 5.37	
DLA Standard Unit Price (Inventory)	FY 2009	ANY (470)	7.71	
	FY 2011	ANY (214)	10.25	
Boeing PO AMR767P	4/30/2005	41	28.00	
Boeing PO 2004137	6/25/2005	214	28.00	
Burdened Boeing PO Price			**37.52**	
Boeing "Competitive Quote" from Olympic Tool (2008-2009 Average)	12/14/2005	1-3	1,258.00	
DCMA Review of Competitive Quotes (2008-2009 Average)	1/24/2006		1,259.26	
Phase III Material Certification Cutoff Date 6/1/2006				
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2008 (6/15/2007)	44/18	**1,533.82**	3,988.0
	2009 (6/15/2007)	32/32	**1,678.61**	4,373.9
Proposed Follow-On Contract (2010-2014)	2/1/2010	160 (32/year)	50.04 to 52.47	

Figure 12 shows the ramp gate roller assembly, which is used on the Chinook helicopter.

Figure 12. Sample 398 – Ramp Gate Roller Assembly

Sample 45 – Hydraulic Motor (NSN 1650-00-834-1430) *(Commercial Price Quote Issue and Pass-Through Problem)*

Officials from AMCOM and Boeing negotiated a total price of about $1.4 million for 63 of the hydraulic motors from 2006 through 2009; but procured only 29 hydraulic motors for a total price of $629,291, or a weighted average unit price of $21,699.69. Boeing provided a commercial catalog quote from Goodrich for a quantity of one to support negotiations for the part. In November 2008, AMCOM officials procured this part from Eaton Aerospace, LLC[25] (Eaton), the OEM of the part, for only $6,066.00; therefore, AMCOM officials were paying 257.7 percent more under the CCAD/Boeing contract than it previously paid for the same part. Additionally, Boeing officials stated that they are also procuring this part from Eaton for the United Kingdom program and that Boeing has 18 of the hydraulic motors in inventory. In response to a discussion draft of this report, Boeing officials stated that it is "investigating pursuing refund from Goodrich," if there is no value being added as the part is passed-through from Eaton to Goodrich to Boeing.

Using the AMCOM procurement price from Eaton as a baseline and then applying the Boeing wrap rate, we calculated that AMCOM officials paid Boeing $629,291 for the 29 hydraulic motors procured when it should have paid only $235,725, or a difference of $393,566 (167.0 percent). The total follow-on contract price of about $2.7 million for 84 hydraulic motors was also based on procuring the part as a pass-through part from Goodrich. The Army could save about $2.0 million if Boeing purchased the hydraulic motors from the OEM instead.

[25] Eaton acquired Vickers, Incorporated in 1999.

Table 13 shows the pricing information and Figure 13 shows a picture of the hydraulic motor, which is used on the Chinook helicopter.

Table 13. Sample 45 – Pricing Information for the Hydraulic Motor

	Date	Quantity	Unit Cost/Price	Percent Difference
AMCOM Procurement (Eaton)	11/14/2008	73	$ 6,066.00	
Boeing Burdened Price (Based on the AMCOM OEM Price)			**8,128.44**	
Commercial Quote (Goodrich)*	9/26/2006	1	18,081.66	
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2006 (8/8/2005)	4/0	20,068.35	
	2007 (6/15/2007)	6/5	**21,303.56**	162.1
	2008 (6/15/2007)	33/4	**21,447.24**	163.9
	2009 (6/15/2007)	20/20	**21,849.21**	168.8
DCMA Review of Catalog Quotes (2006-2009 Average)	10/13/2004		15,759.31	
Proposed Follow-On Contract (2010-2014)	2/1/2010	Range 16-20/year	31,164.51 to 32,253.53	

* Unit price is based on a 2006 Goodrich standard commercial catalog price with 3 percent escalations for 2007, 2008, and 2009.

Figure 13. Sample 45 – Hydraulic Motor

Source: DLA Distribution Susquehanna, Pennsylvania

Boeing needs to provide AMCOM a refund of $393,566 for this part for procuring the part from anyone other than the OEM at a grossly inflated catalog price. We calculated that the Army can save about $2.0 million on the follow-on CCAD/Boeing contract if Boeing procures the part directly from the OEM instead of from Goodrich as a commercial part. *The*

AMCOM contracting officer should procure the part directly from Eaton, the OEM, unless Boeing procures the part from the OEM at a fair and reasonable price. [Recommendation B.2.b]

Sample 415 – Needle Roller Bearing (NSN 3110-01-136-9793) *(Priced Incorrectly on the Follow-On Contract)*

The follow-on CCAD/Boeing contract proposal shows a requirement for 420 needle roller bearings over the 5-year contract at a weighted average unit price of $307.73, for a total price of $129,248. However, on January 16, 2008, Boeing procured 166 needle roller bearings at a unit price of only $4.15. We calculated that the burdened Boeing price should be $5.56, and the total Army contract price for the 420 needle roller bearings should be only about $2,336, or a savings of $126,912.

Boeing Obtained Quantity Discounts and Negotiated Lower Prices That Were Not Passed on to the Army

Boeing negotiated lower prices with its suppliers shortly after negotiations with AMCOM officials. For seven of the parts reviewed, we calculated that AMCOM officials paid Boeing $13.8 million for parts that should have cost only $7.8 million, or a difference of 77.7 percent. AMCOM officials need to request a refund from Boeing for these parts because Boeing made an excessive profit.

Generally, the unit prices for spare parts that Boeing procures from its suppliers are set within ranges based on quantities purchased; therefore, the larger the quantity purchased, the less the per part price. When a contractor is able to purchase parts in large quantities, it is referred to as an economic order quantity discount. For the parts we reviewed, there appears to be a recurring pattern of Boeing negotiating a price based on a specific quantity with the Army and then either 1) purchasing larger quantities of the part at a cheaper price or 2) negotiating a lower price with its supplier shortly after the material certification cutoff date with the Army. Boeing always charged the Army the higher price, even when its contract requirements increased. Although the firm-fixed-price nature of the contract does not specifically require the contractor to share range pricing with the Army after a price is negotiated, the viability of the CCAD/Boeing contract is questionable unless AMCOM officials can find a more effective way to negotiate prices.

Boeing purchased direct material using combined buys resulting in lower unit prices than proposed.

Table 14 shows the seven sample parts that Boeing negotiated a better price for with its supplier after negotiations with AMCOM and did not share the savings with the Army.

Table 14. Boeing Negotiated Better Prices with Its Suppliers After Negotiations with AMCOM

Sample Number	NSN	Contract Price for Parts Procured	IG Fair and Reasonable Price	Difference		Boeing Refund
				Amount	Percent	
7	3110013560489	$ 6,728,618	$4,039,396	$2,689,222	66.6	
13	6105004634901	4,995,702	3,019,198	1,976,504	65.5	
20	6105002512494	1,143,949	372,369	771,580	207.2	
167	1615012198666	306,678	230,131	76,546*	33.3	
200	5340011611199	273,354	42,542	230,812	542.6	
324	3120008810018	258,676	25,614	233,062	909.9	
338	1650009559586	70,862	22,559	48,303	214.1	
Total		**$13,777,838***	**$7,751,809**	**$6,026,029**	**77.7**	

* Totals do not add due to rounding.

The AMCOM Contracting Officer needs to request a refund of $6,026,029 from Boeing for parts for which lower prices were negotiated with suppliers shortly after prices were negotiated with the Army. [Recommendation B.2.c]

The following section includes detailed information for most of the sample numbers in Table 14. See Appendix C for information on samples 20, 167, and 324. For our calculation of the cost impact, see Appendix E.

Sample 7 – Annular Ball Bearing (NSN 3110-01-356-0489) *(Quantity and Quote Issue)*

Officials from AMCOM and Boeing negotiated a contract price of $7.0 million for 686 annular ball bearings, and the Army procured 642 annular ball bearings at a total price of $6.7 million; a weighted average unit price of $10,480.71. The Boeing proposed price was based on a quote with range pricing for quantities of 100 to 249 for $7,516.00 to $8,701.00 each. Boeing then combined buys to get a much lower price for the annular ball bearings. On September 13, 2005, about 2 months after the material certification date of June 30, 2005, Boeing procured a large quantity of annular ball bearings (1,783) from its supplier at prices that were 27.2 percent to 32.0 percent less than historical prices. The total value of the PO was $8.4 million, and the burdened unit price, based on the new purchase price, would have been $6,291.89. Using the prices that Boeing actually paid for the annular ball bearings, we calculated that the Army paid Boeing $6.7 million for the 642 annular ball bearings procured when it should have paid only $4.0 million, or a difference of $2.7 million (66.6 percent).

Table 15 shows the pricing information, and Figure 14 shows a picture of the annular ball bearing, which is used on the Chinook helicopter.

Table 15. Sample 7 – Pricing Information for the Annular Ball Bearing

	Date	Quantity	Unit Cost/Price	Percent Difference
Boeing Quote From RBC Bearings/Industrial Tectonics Bearing (2006-2009)	3/3/2005	100-249	$ 7,516.00 to 8,701.00	
Phase IIA Material Certification Cutoff Date 6/30/2005				
Boeing PO With Industrial Tectonics Bearing 2002336	9/13/2005	1,398	4,625.34	
Boeing PO With Industrial Tectonics Bearing 2002336	9/13/2005	385	4,950.00	
Burdened Boeing Price (Weighted Average PO 2002336)			**6,291.89**	
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2006 (8/8/2005)	150/54	**9,022.30**	43.4
	2007 (8/8/2005)	150/165	**9,400.60**	49.4
	2008 (11/1/2007)	188/186	**10,737.98**	70.7
	2009 (11/1/2007)	198/237	**11,363.08**	80.6
DCAA Review of Supplier Firm Quotes (2006-2009 Average)	10/13/2004		8,041.05	
Proposed Follow-On Contract (2010-2014)	2/1/2010	1,040 (208/year)	7,103.38 to 7,351.60	

Figure 14. Sample 7 – Annular Ball Bearing

Source: Defense Distribution Depot Red River, Texas

Sample 13 – Motor Armature (NSN 6105-00-463-4901) *(Quantity and Commercial Price Quote Issue)*

Officials from AMCOM and Boeing negotiated a total price of $4.7 million for 968 motor armatures from 2005 through 2009 on the CCAD/Boeing contract, and the Army procured 1,043 motor armatures at a weighted average unit price of $4,789.74. Boeing had historical data from April 30, 2005, for procurements of only 10 parts at a unit price of $3,775.00, and 2 parts at a unit price of $3,900.00. Boeing also had a quoted price for a range of 12 to 50 commercial parts at a unit price of $3,500.00 that was used to support the negotiated price. However, less than 3.5 months after the material certification cutoff date, Boeing purchased 360 armature assemblies for delivery in 2006 and 2007 at a much lower unit price of $2,189.00. The DCAA Southern New Jersey Branch reviewed commercial price quotes to support the proposed contract price. Although the commercial quotes were in line with the contract price, the quotes were 59.9 percent higher than the October 11, 2005, unit price that Boeing negotiated with its supplier. We calculated that the Army paid Boeing $5.0 million for the 1,043 motor armatures procured when it should have paid only $3.0 million, or a difference of $2.0 million (65.5 percent). Table 16 shows the pricing information for the motor armature.

Table 16. Sample 13 – Pricing Information for the Motor Armature

	Date	Quantity	Unit Cost/Price	Percent Difference
DCAA Review of Vendor Quotes (2005-2009 Average)	10/13/2004		$4,174.00	
Honeywell Price Quote	3/16/2005	12 to 50	3,500.00	
Boeing PO AMS206P	4/30/2005	10	3,775.00	
Boeing PO AMS206P	4/30/2005	2	3,900.00	
Phase IIA Material Certification Cutoff Date 6/30/2005				
Boeing PO 2009707	10/11/2005	360	2,189.00	
Burdened Boeing PO Price (Weighted Average)			**2,894.73**	
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2005 (8/8/2005)	29/0	4,384.56	
	2006 (8/8/2005)	170/159	**4,457.00**	54.0
	2007 (8/8/2005)	170/332	**4,525.78**	56.3
	2008 (11/1/2007)	289/272	**4,993.36**	72.5
	2009 (11/1/2007)	310/280	**5,093.88**	76.0
DLA Price (Honeywell)	7/30/2009	30 up	1,317.18	
DLA Standard Unit Price	11/20/2010	Any	1,790.80	
Proposed Follow-On Contract (2010-2014)	2/1/2010	1,290 (258/year)	3,009.08 to 3,215.25	

Figure 15 shows the motor armature, which is used on the Chinook helicopter.

Figure 15. Sample 13 – Motor Armature

Source: DLA Distribution Susquehanna, Pennsylvania

DLA Aviation has a long-term contract with Honeywell that uses a process called "one pass pricing." The one pass pricing process involves a group of DoD pricing experts providing real-time advice to the DLA Aviation contracting officer reviewing the Honeywell cost data used to support the proposed/negotiated price. The motor armature was also one of the parts included on a re-pricing event as part of a DoD Lean Six Sigma Project, "DLA/Honeywell Long-Term Contract Model Using One Pass Pricing for Sole-Source Spare Parts." As part of the re-pricing event, DLA Aviation was able to negotiate a lower unit price for the Honeywell motor from $1,317.18 to $888.31 (based on an economic order quantity of 30 and up and available through May 6, 2011). Using the FY 2011 DLA Aviation long-term contract cost recovery rate of 39.9 percent, we calculated that the DLA standard unit price for this part would be only about $1,242.75, if the parts were procured from DLA in 2011 or a difference of almost 150 percent. The DLA price for the Honeywell motor is significantly less than the Boeing price. Unfortunately, the new unit prices may never be realized because DLA currently has stock on hand of 255 parts and a monthly consumption quantity of only 2.05 or about 25 parts per year. Therefore, DLA will not procure the part again for over 10 years, and AMCOM officials plan to meet CCAD requirements of 258 per year on the follow-on CCAD/Boeing contract.

The DLA price for the Honeywell motor is significantly less than the Boeing price.

As shown in Table 17, over the next 5 years, the Army expects to buy 1,290 of the Honeywell motors from Boeing and spend almost $2.3 million or 127.7 percent more procuring the same Honeywell motor from Boeing that it can get from DLA. We commend the DLA Aviation contracting officer and cost/price analyst for their ability to negotiate a better price for the Honeywell motor as compared to Boeing.

Table 17. Sample 13 – Proposed Boeing/CCAD Follow-On Contract Prices and DLA Prices for the Honeywell Motor

		Proposed CCAD/Boeing Contract Price		DLA Standard Unit Price		Total Difference	
Year	**Qty**	**Unit Price**	**Total Price**	**Unit Price**	**Total Price**	**Amount**	**Percent**
2010	258	$3,009.08	$ 776,343	$1,790.80	$ 462,026	$ 314,316	68.0
2011	258	3,098.39	799,385	1,242.75	320,628	478,756	149.3
2012	258	3,124.60	806,147	1,256.16	324,090	482,057	148.7
2013	258	3,167.72	817,272	1,274.25	328,757	488,515	148.6
2014	258	3,215.25	829,535	1,292.60	333,491	496,044	148.7
Total	**1,290**		**$4,028,680**		**$1,768,992**	**$2,259,688**	**127.7**

AMCOM officials need to procure or have Boeing procure this part from DLA Aviation to save $2,259,688 over the next 5 years and help protect warfighter resources. [Recommendation B.2.d]

Sample 200 – Nut and Bolt Retainer (NSN 5340-01-161-1199) *(Quantity Issue)*

AMCOM officials procured 716 nut and bolt retainers from 2005 through 2009 on the CCAD/Boeing contract at a total cost of $273,354; a weighted average unit price of $381.78. Boeing used a firm-fixed-price range vendor pricing quote from Purdy as supporting documentation for the CCAD/Boeing contract price. The range pricing quote for 2009 shows a unit price of $302.00 for a quantity of 5 to 15, and a much lower unit price of $37.00 for quantities of more than 101. We calculated that the Army overpaid $230,812 for this part because the contract price was based on range pricing for a quantity of 5 to 15 parts, and when the contract quantity increased to more than 100 parts in 2008, Boeing did not share the quantity discount offered by the supplier. Additionally, Timken and Purdy are two of the subcontractors that the DCAA Southern New Jersey Branch identified that Boeing had not completed the required cost or price analyses before negotiating the CCAD/Boeing contract with the Army. DLA purchased 995 of the parts in November 2007 for only $4.59 each and as of December 3, 2010, had stock on hand of 734 parts at a standard unit price of $6.77 and annual consumption of only about 138 parts. The Boeing proposed unit price of $52.93 on the follow-on contract is roughly 681.8 percent more than the DLA price.

Table 18 shows the pricing information, and Figure 16 shows a picture of the nut and bolt retainer, which is used on the Apache helicopter.

Table 18. Sample 200 – Pricing Information for the Nut and Bolt Retainer

	Date	Quantity	Unit Cost/Price	Percent Difference
Firm-Fixed-Price Vendor Range Quote (Purdy)	5/17/2005	5-15	$302.00	
		101+	37.00	
Phase IIA Material Certification Cutoff Date 6/23/2005				
DLA Procurement (Kampi Components Co., Inc.)	11/20/2007	995	4.59	
DLA Standard Unit Price	12/3/2010	Any	6.77	
Burdened Boeing Purchase Contract (Timken) (Weighted Average)	2005-2009		**59.42**	
Boeing Purchase Contract (Intercompany Transfer)	4/17/2009	50	91.25	
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2005 (8/8/2005)	15/15	**90.56**	52.4
	2006 (8/8/2005)	15/15	**291.66**	390.8
	2007 (6/15/2007)	15/10	**352.65**	493.5
	2007 (6/15/2007)	15/60	**371.77**	525.7
	2008 (6/15/2007)	380/232	**382.90**	544.4
	2009 (6/15/2007)	480/384	**398.32**	570.3
Proposed Follow-On Contract (2010-2014)	2/1/2010	2,400 (480/year)	52.93 to 78.51	

Figure 16. Sample 200 – Nut and Bolt Retainer

We discussed this part with Boeing in June 2010, and the Boeing CCAD Program Business Manager stated that contract modification P00089, June 15, 2007, added a special contract requirement for fixed unit prices and estimated quantities. Specifically, the clause states:

> (a) Components for the new baseline (WLF 08) shall be procured by the Government on a fixed unit price/estimated quantity basis. Contractor shall provide the ordered parts at a fixed unit price using estimated quantities as prescribed below.
> (b) The Government shall provide Workload Forecasts as per H-11 for each option years requirement. The Contractor shall plan material support based upon these requirements which shall be reflected in modifications to attachments 9 & 10 part number quantities. All Workload Forecasts shall be reviewed/approved jointly between the Government and the Contractor.
> **(c) Unit prices for changes in the Workload Forecast shall be fixed per attachments 9 & 10 as delineated in modification P00089 and quantities shall be adjusted at those fixed unit prices by modification to the contract. [emphasis added]**

We take exception to the contract clause. It makes little sense to change quantities and not change unit prices. The Army will lose significantly more than it gains in this situation. Procuring parts in economic order quantities is a statutory requirement. Specifically, 10 U.S.C. § 2384a, "Supplies: economic order quantities," states that agencies must procure supplies in such quantity that will result in the most advantageous total cost and unit cost and does not exceed the quantity reasonably expected to be required by the agency. However, because the contract pricing was based on a lower quantity, Boeing benefitted from a quantity discount while the Army paid a higher unit price. Boeing did not share the quantity pricing with the Army because the contract is a firm-fixed-price contract. *The AMCOM contracting officer needs to ensure the follow-on contract does not include any clauses that would prevent the Army from obtaining economic order quantity pricing.* [Recommendation B.2.e – Internal Control]

Sample 338 – Linear Actuating Cylinder Head (NSN 1650-00-955-9586) (*Quantity and Dealer Price Quote Issue)*

Officials from AMCOM and Boeing negotiated a total price of $152,617 for 28 linear actuating cylinder heads in 2008 and 2009; a weighted average unit price of $5,450.60. Boeing used a price quote from Derco Aerospace, Inc. (an aviation spare parts dealer) as support for the contract price. Less than 2 months after the material certification cutoff date, Boeing purchased 54 parts from the OEM at a unit price of only $1,295.00. The quoted unit price, $4,171.00 for 5 parts, was 222.1 percent more than the $1,295.00 unit price Boeing paid the supplier. We calculated that the Army paid Boeing $70,862 when they should have paid $22,559, a difference of $48,303 (214.1 percent).

Table 19 shows the pricing information, and Figure 17 shows the linear actuating cylinder head, which is used on the Chinook helicopter.

Table 19. Sample 338 – Pricing Information for the Linear Actuating Cylinder Head

	Date	Quantity	Unit Cost/Price	Percent Difference
Army Procurement (W&G Machine Co., Inc.)	12/12/2007	60	$ 902.27	
Boeing Quote (Derco Aerospace, Inc.)	3/7/2007	5	4,171.00	
DCMA Review of Noncompetitive Quote (2008-2009)	3/20/2007		4,216.92	
Phase IIB Material Certification Cutoff Date 4/24/2007				
Boeing PO 2046855	6/13/2007	54	1,295.00	
Burdened Boeing PO Price			**1,735.30**	
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2008 (6/15/2007)	11/5	**5,427.38**	212.8
	2009 (6/15/2007)	17/8	**5,465.63**	215.0

Figure 17. Sample 338 – Linear Actuating Cylinder Head

Source: DLA Distribution Susquehanna, Pennsylvania

Costs for Boeing to Manufacture Parts Are Much More Than if Boeing Purchased the Parts

We identified two Boeing-manufactured parts in our cost analysis sample with significantly higher prices when compared to prices of other suppliers. In fact, Boeing's decision to manufacture these parts resulted in $3.2 million in contract costs, and we calculated that these costs should have been only $438,503, a difference of $2.8 million or 630.0 percent. We found no documented justification for these expensive "buy" to "make" decisions.

Table 20. Boeing's Contract Prices to Manufacture Parts Were Significantly Higher Than Had Boeing Purchased the Parts

Sample Number	NSN	Contract Price for Parts Procured	IG Calculated Fair and Reasonable Price	Difference		Boeing Refund[1]
				Amount	Percent	
3	3120001384083	$2,924,329	$396,098	$2,528,230[2]	638.3	$164,535
206	1680011056441	276,779	42,405	234,373[2]	552.7	
Total		**$3,201,107[2]**	**$438,503**	**$2,762,604[2]**	**630.0**	**$164,535**

[1] After we issued the draft report, Boeing provided the Army a refund for sample 3.
[2] Totals do not add due to rounding.

The AMCOM contracting officer needs to document reasons for Boeing to manufacture parts at significantly higher prices than what the prices would have been had the parts been purchased parts. [Recommendation B.2.f – Internal Control]

Sample 3 – Sleeve Bushing (NSN 3120-00-138-4083) *(Boeing Make Issue)*

Officials from AMCOM and Boeing negotiated a 2007 to 2009 contract price totaling $6.3 million for 1,483 of the sleeve bushings, and the Army procured 726 sleeve bushings at a total price of $2.9 million; a weighted average unit price of $4,028.00. However, DCAA and DCMA reviewed 2007 to 2009 supplier firm price quotes for this part that listed unit prices ranging from $554.18 to $599.40. Boeing officials stated that this part should not have been proposed as a buy part because it had always been a Boeing manufactured part. Unfortunately, the Boeing cost to manufacture the part was significantly higher than either the DLA standard unit price or the vendor quotes reviewed by the DCAA Southern New Jersey Branch. Using the DLA standard unit price, we calculated that the Army overpaid $2.5 million, or 638.3 percent more, for the 726 parts actually procured. We found no documentation that supported the AMCOM decision to purchase the Boeing manufactured part at a significantly higher price. In addition, according to AMCOM officials, there were no longer requirements for this part because a decision was made to stop the repair program on the higher level assembly part because it was not cost-effective. However, the person that made that decision had since retired, and the analysis conducted to arrive at that determination was not documented. Table 21 shows the pricing information for the sleeve bushing.

Table 21. Sample 3 – Pricing Information for the Sleeve Bushing

	Date	Quantity	Unit Cost/Price	Percent Difference
DCAA Review of Vendor Quotes	10/13/2004		$ 554.18 to 599.40	
Burdened Average Quotes			772.70	
DLA Standard Unit Price	11/20/2010	Any	**545.59**	
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2007 (6/19/2006)	375/375	**3,845.36**	604.8
	2008 (11/1/2007)	780/351	**4,223.13**	674.0
	2009 (11/1/2007)	328/0	**4,656.87**	753.5

Figure 18 shows a picture of the sleeve bushing, which is used on the Chinook helicopter.

Figure 18. Sample 3 – Sleeve Bushing

Source: Defense Distribution Depot Corpus Christi, Texas

As of April 2010, there were 1,276 of the sleeve bushings in inventory in the Army's work-in-process control account; inventory records show that 272 of the sleeve bushings, valued at about $1.1 million, had been supplied by Boeing. Using the DLA standard unit price for the remaining 1,004 sleeve bushings, valued at $547,772, at CCAD, the total value of the inventory at CCAD was $1.7 million. DLA also had 965 parts, valued at $526,494 (8 monthly consumption), resulting in a total excess DoD inventory valued at about $2.2 million. Boeing also had 350 of the sleeve bushings in its inventory. According to CCAD officials, half of the quantity in the work-in-process control account was unrestricted project stock, and the other half was restricted. We question why CCAD inexplicably stopped the repair program while DoD still had $2.2 million of inventory. *AMCOM officials need to determine whether the suppliers that produce the higher level assembly can use these parts as Government-furnished material and, if not, determine whether it is more cost-effective to continue the repair program and use the CCAD inventory, DLA inventory, and Boeing inventory valued at more than $2.2 million as part of the repair program.* [Recommendation B.2.g]

CCAD inexplicably stopped the repair program while DoD still had $2.2 million of inventory.

Sample 206 – Manifold Tube Assembly (NSN 1680-01-105-6441) *(Buy to Make Issue)*

Officials from AMCOM and Boeing negotiated a total price of $1.0 million for procurement of 1,507 manifold tube assemblies from 2005 through 2009, and AMCOM officials procured 409 manifold tube assemblies at a total price of $276,779; a weighted average unit price of $676.72. The Army procured 163 of the parts in 2009 at a unit price of $751.51. The Army was previously buying the part from another manufacturer for only $82.91 per part. DoD EMALL data shows a $103.68 standard unit price with stock on hand of 757 parts. The annual consumption quantity for this part is 99 parts. The 2010 follow-on contract proposed prices range from $351.16 to $407.93; however, it does not make sense for Boeing to

manufacture this part when the DoD EMALL price is $103.68. We calculated that the Army paid Boeing $276,779 for the 409 manifold tube assemblies procured when it should have paid only $42,405, or a difference of $234,373 (552.7 percent). Figure 19 shows the manifold tube assembly, which is used on the Chinook helicopter.

Figure 19. Sample 206 – Manifold Tube Assembly

Costs for Some Parts Were In Line With Negotiated Contract Prices

Out of our cost analysis sample of 24 parts, 6 sample parts, valued at $11.3 million, were in line with the negotiated contract amount. Although the Army consumed less parts and Boeing was paid $220,735 less than the initial negotiated amount when compared to the fair and reasonable price, Boeing technically did not lose money on these parts. Boeing applies a 34 percent wrap rate to its parts to account for overhead costs and profit. Specifically, Boeing's profit percentage, included in the wrap rate, is 16 percent. For Boeing to lose money on these parts, the overall percent difference would have to be more than 16 percent. For our sample parts, the actual price paid was 1.9 percent lower; therefore, we considered these parts in line with the negotiated contract amount. Table 22 shows the sample parts that had prices in line with the negotiated contract prices.

Table 22. Parts That Had Prices In Line With Negotiated Contract Prices

Sample Number	NSN	Contract Price for Parts Procured	IG Calculated Fair and Reasonable Price	Difference	
				Amount	Percent
6	1615011994145	$ 4,827,152	$ 4,618,964	$208,188	4.5
8	1615011987553	4,520,724	4,521,792	(1,069)*	(0.02)
67	1615012053921	1,072,971	1,496,799	(423,828)	(28.3)
83	1560011153618	605,314	603,368	1,945*	0.3
222	1620008689795	305,486	311,412	(5,926)	(1.9)
276	6105011204285	3,266	3,311	(45)	(1.4)
Total		**$11,334,911***	**$11,555,646**	**($220,735)**	**(1.9)**

* Totals do not add due to rounding.

Boeing's Actual Costs Are Significantly Lower Than the Estimates Used to Establish Firm-Fixed Prices

Because of the pricing problems identified in this report that consistently favored Boeing and the fact that AMCOM does not have an experienced cost/price analysis group, we consider the use of a firm-fixed-price contract to be too high risk. The audit showed that due to Boeing's business practices, there is a high probability that its actual costs were significantly lower than the estimates used to establish firm-fixed prices. We believe the fixed-price incentive is far more appropriate for use when cost uncertainties are too great to use a firm-fixed-price contract, when costs can be identified and quantified to the extent that a reasonable target can be established, and when a price ceiling can be applied with confidence that it will not be breached. We also believe it will be difficult for AMCOM officials to negotiate an effective follow-on contract to address both the inventory and pricing issues without outside technical support. Therefore, we are recommending that the Director, Defense Procurement and Acquisition Policy, establish a "rapid improvement team" of logistics and pricing experts to provide technical advice to the AMCOM contracting officer. In addition, the Director, Defense Procurement and Acquisition Policy, should establish policy showing a clear preference for the use of fixed-price incentive contracts on contracts exceeding $100 million (including option years) unless the Government objective price was developed by an experienced cost/price analysis group.

Due to Boeing's business practices, there is a high probability that its actual costs are significantly lower than the estimates used to establish firm-fixed prices.

AMCOM officials need to negotiate a fixed-price-incentive contract for the follow-on CCAD/Boeing contract so both parties may benefit from Boeing negotiating lower prices with its suppliers. [Recommendation B.2.h – Internal Control]

The Director, Defense Procurement and Acquisition Policy, needs to establish a "rapid improvement team" of logistics and pricing experts to provide technical advice to the AMCOM contracting officer to address inventory and pricing issues on the follow-on CCAD/Boeing contract. [Recommendation B.3.a] *The Director also needs to establish policy showing a clear preference for the use of fixed-price incentive contracts on contracts exceeding $100 million (including option years) unless the Government objective price was developed by an experienced cost/price analysis group.* [Recommendation B.3.b]

Poor Communication Between CCAD Workers and Boeing for Potential Nonconforming Parts at CCAD

During a visit to CCAD in September 2010, CCAD workers showed us three problem parts that were requiring significant amounts of rework or were not usable. They also showed us a bearing that had an expired lubrication date and required re-lubing in the CCAD bearing shop at a cost of about $150 each. CCAD workers explained that the new direct selector sets and linear actuating cylinder pistons, both swivel and pivot, were not working up to 50 percent of the time. CCAD workers stated that they had mentioned the nonconforming parts issues to

Boeing, however no corrective action had been taken. During a September 2010 meeting, Boeing officials stated that they were unaware of any issues regarding the parts. Boeing later explained that they had some records in their archives regarding the parts and that Boeing engineers were beginning to address the issues. See Appendix D, "Potential Nonconforming Parts," for details.

We contacted an engineer with the Army Aviation and Missile Research Development Engineering Center who stated that he thought the problem with the direct selector sets and the linear actuating cylinder pistons may relate to improper use of an anti-seize thread compound. He stated that the problem had been ongoing for several years, but in his recent testing of new and old parts, he had found the parts were not working about 5 percent to 8 percent of the time. The engineer stated that he wanted to try the anti-seize thread compound first to determine if the part was nonconforming before involving Boeing engineering support because he thought the problem may be a technique issue with how the compound was applied. The engineer stated that he consulted Boeing engineering personnel on his findings, and they provided technical suggestions, which were successful on three new pistons and lockrings. He also stated that the Army depot maintenance work requirement manual covered part of the technique, and he is modifying the manual to incorporate the remainder of the new technique. The engineer stated that Boeing removed the second onsite engineer, who previously assisted in such issues, from the Army Aviation and Missile Research Development Engineering Command office at Corpus Christi Naval Air Station.

The CCAD/Boeing contract did not include language regarding nonconforming parts; however, AMCOM officials are paying Boeing for engineering support; and therefore, Boeing should be involved in determining whether parts are nonconforming. *AMCOM officials need to involve Boeing engineers in determining whether the direct selector sets and linear actuating cylinder pistons are nonconforming parts and address the expiration dates related to re-lubing bearings.* [Recommendation B.2.i] *AMCOM officials also need to implement procedures to promptly notify Boeing and appropriate Government officials regarding potential nonconforming parts.* [Recommendation B.2.j]

According to the Director Aviation Logistics, AMCOM Contracting Center, when the follow-on CCAD/Boeing contract is definitized, it will include a clause regarding nonconforming parts. Specifically, the clause will require the Government to notify Boeing upon discovery of nonconforming materials and require Boeing to support the return and replacement of the affected parts at no additional cost to the Government.

Management Comments on the Finding and Our Response

Department of the Army Comments

The Commander, AMCOM, stated that the contracting officers used approved methodologies in determining fair and reasonable prices based on the data available at the time of negotiations, and that DCAA and DCMA also participated in reviewing the proposed bill of materials. The Commander also stated that for the follow-on contract, 7 items were priced lower than the IG recommendations and 10 items were in line. Additionally, he stated that in addition to the DCAA audit process, DCMA and contracting teams intensely evaluated the

follow-on contract using price analysis techniques. Further, the Commander stated that dynamic changes can occur to impact the depot workload, such as major program changes or depot overhaul factor changes. He stated that these changes regularly result in fluctuations of quantities of parts required and that the contract type needs to be flexible enough to allow for these changes, recognizing that this may not lead to the lowest price solution by the partner.

Our Response

We commend the AMCOM contracting officer for obtaining lower contract prices for the sample items on the follow-on contract. For the initial contract, the contracting officer may have used "approved methodologies in determining fair and reasonable prices," including reviews by both DCAA and DCMA, but those methodologies could be improved. The methodologies need to ensure that Boeing prepared a complete, current, and accurate proposal and performed appropriate cost and price analysis of subcontractor proposals before negotiations with the Government to prevent the blatant pricing problems identified in the report. Additionally, when program changes result in significantly higher quantities of parts being procured and lower costs to Boeing, we believe the discounts should be passed on to the Government.

Recommendations, Management Comments, and Our Response

Revised Recommendation

As a result of management comments, we revised Recommendation B.3.a to clarify the actions needed to address excess inventory and pricing issues.

B.1. We recommend that the Director, Defense Contract Management Agency, instruct the Contractor Purchasing System Division Director to identify the purchasing system at Boeing-Philadelphia as high risk and schedule a purchasing system review to determine whether Boeing conducts subcontractor price and cost analyses before prime contract negotiations and whether quantity discounts are being adequately passed on to the Government.

Defense Contract Management Agency Comments

The Acting Executive Director, Contracts, DCMA, agreed stating that DCMA has identified Boeing Philadelphia's Purchasing Systems as high risk, and a Contractor Purchasing System Review is scheduled for July 11, 2011. The Acting Executive Director stated that the review will address the timing of subcontractor analysis and whether discounts are passed on to the Government.

Our Response

The Acting Executive Director, Contracts, DCMA, comments are responsive. No further comments are required.

B.2. We recommend that the Commander, Army Aviation and Missile Life Cycle Management Command, instruct the contracting officer to:

a. Obtain refunds from Boeing for the national stock numbers priced with defective data (1680-00-245-1833, 3020-00-566-2521, 3120-00-834-1507, 3120-00-866-6099, 1650-00-955-9588, 1560-00-409-4101); unnecessary pass-through costs (1650-00-834-1430); and correct prices on the follow-on contract (1650-00-834-1430 and 3110-01-136-9793).

Department of the Army Comments

The Commander, AMCOM, partially agreed. The Commander stated that he could not agree with the allegation of defective data until DCAA completed a post award audit of the contract. Specifically, the Commander disagreed with obtaining refunds for NSNs 3120-00-834-1507 (sample 356) and 1650-00-955-9588 (sample 376) pending the results of the DCAA defective pricing audit. The Commander stated that AMCOM has requested the audit, and if defective pricing is identified, AMCOM will obtain appropriate adjustments. He agreed, however, with accepting refunds for pricing anomalies for some parts.

The Commander stated that Boeing submitted a voluntary refund of $1,657,804.62 for five parts: NSNs 1680-00-245-1833 (sample 5), 3020-00-566-2521 (sample 91), 3120-00-866-6099 (sample 371), 1560-00-409-4101 (sample 398), and 5307-01-163-4676 (sample 110). The Commander stated that Boeing was pursuing a refund from Goodrich for the apparent excessive markup on NSN 1650-00-834-1430 (sample 45) and Boeing will refund AMCOM an appropriately adjusted amount upon recovery from Goodrich. He also stated that the follow-on contract quantity for this part will be supplied with Government-furnished material in existing inventory. In addition, the Commander stated that the follow-on contract will use DLA-supplied inventory for NSN 3110-01-136-9793 (sample 415).

Our Response

Although the Commander, AMCOM, partially agreed, the comments are responsive. We agree with the Commander's action to request a DCAA post award audit of the contract and, if the audit identifies defective pricing, then contractor offsets should be addressed, as required by statute. However, Boeing had information that was reasonably available before the material certification cutoff dates that was not used to support contract prices. Although the Commander did not agree with the allegation of defective data pending the results of the DCAA post award audit, Boeing provided, and AMCOM accepted, refunds for pricing anomalies of $1,657,804.62 that were in line with our calculations.

We disagree with AMCOM's position on NSNs 3120-00-834-1507 (sample 356) and 1650-00-955-988 (sample 376). The Commander stated that Boeing used a firm-price quote rather than procurement history to establish the proposed price for sample 356, and that the historical procurement quantities we used were not reasonably related to the firm price Boeing used in its proposal. However, we based our calculation on a weighted average of Boeing purchase orders that included quantities similar to contract requirements. Specifically, the two most recent purchase orders (issued 2 and 8 months before the material certification cutoff date) were for quantities similar to the contract requirements at unit prices that were about $200 less than the contract price. Therefore, the Boeing contract price is not supported by Boeing purchase history for this part. As the Commander states, the follow-on contract pricing is in line with our calculation; therefore, our position remains that Boeing

should provide the Army a refund of $76,902 for this part. For sample 376, the Commander stated that the procurement we used to calculate impact did not occur until more than 1 year after agreement on contract price. We used a conservative weighted average of two purchase orders that Boeing placed in 2003 and 2006; both were issued before the material certification date of June 1, 2006. It remains our position that Boeing should provide the Army a refund of $29,877 for this part. However, the DCAA defective pricing audit should address these issues; therefore, no further comments are required.

b. Procure national stock number 1650-00-834-1430 directly from the original equipment manufacturer unless Boeing procures the part from the original equipment manufacturer at a fair and reasonable price.

Department of the Army Comments

The Commander, AMCOM, agreed. He stated that for the follow-on contract, NSN 1650-00-834-1430 will be supplied with Government-furnished material in existing inventory.

Our Response

The Commander, AMCOM, comments are responsive. No further comments are required.

c. Request a refund from Boeing for the national stock numbers for which lower prices were negotiated with suppliers shortly after prices were negotiated with the Army (3110-01-356-0489, 6105-00-463-4901, 6105-00-251-2494, 1615-01-219-8666, 5340-01-161-1199, 3120-00-881-0018, 1650-00-955-9586).

Department of the Army Comments

The Commander, AMCOM, disagreed. The Commander stated that because the contract is firm-fixed-price, the bulk of the risk is inherently to Boeing. He stated that Boeing develops pricing based on manufacturing and vendor prices for a five-year contract with initial proposal submission, which adds risk based on a potentially changing economic environment. In addition, he stated that the requirement for Boeing to provide 100 percent of the material puts Boeing at risk of acquiring material that may never be used because of the dynamic depot workload environment. The Commander stated that there is no justification to request a refund for pricing of the seven parts in our sample because Boeing used quotes to establish its proposed price, proposed quantities were based on input from CCAD, and our calculations were based on prices that were dated after the material certification cutoff date.

Our Response

The Commander, AMCOM, comments are partially responsive. We recognize that the contractor assumes risk in a firm-fixed-price contract. However, for the seven sample parts, Boeing purchased parts using combined buys, resulting in lower unit prices than proposed. For five of the seven parts, the Boeing quote used to establish the contract price was significantly higher than the price that Boeing negotiated with its supplier within 3 months after the material certification cutoff date. For another part, Boeing had a price quote with quantity discounts but did not apply the discounted price when the contract quantity increased. We found a recurring issue with the Government negotiating prices based on

vendor quotes that are much higher than the actual prices Boeing negotiates with its suppliers. Our recommendation that the follow-on contract be fixed-price incentive instead of firm-fixed-price (Recommendation B.2.h) was designed to address this issue. However, as stated in our response to that recommendation, we recognize that there is an administrative burden associated with a fixed-price incentive contract. Therefore, another option would be to conduct an annual review of a limited selection of parts designed to identify instances where vendor quotes were significantly higher than negotiated supplier prices and take action to renegotiate prices before exercising future options. Although Boeing did not break the rules in pricing the noted parts, we believe that when Boeing procures higher quantities of parts, resulting in much lower prices, the discounts must be shared with the Army.

In a meeting subsequent to receiving the Commander's comments, the Commander stated that AMCOM contracting officials will perform an annual review of a sample of high-risk, high-dollar parts to validate the individual prices before exercising follow-on orders. This action, in addition to the defective pricing audit that the Commander stated he requested DCAA to perform, meets the intent of the recommendation; therefore, no further comments are required.

d. Procure, or have Boeing procure, national stock number 6105-00-463-4901 from Defense Logistics Agency Aviation at the significantly lower price to save $2,259,688 over the next 5 years.

Department of the Army Comments

The Commander, AMCOM, partially agreed. The Commander stated that stock is available in the Boeing warehouse to support FY 2011 overhaul requirements. The Commander also stated that AMCOM will direct Boeing to use DLA stock to support FY 2012 overhaul requirements.

Our Response

The Commander, AMCOM, comments are responsive. We agree with the Army using Boeing warehouse stock for FY 2011 overhaul requirements. However, going forward, AMCOM should direct Boeing to use DLA stock to support not only FY 2012 overhaul requirements, but future overhaul requirements as well. As shown in Table 17, AMCOM can realize additional savings of $984,559 by procuring the part from DLA to meet FY 2013 and FY 2014 overhaul requirements. In response to Recommendation A.3.a, the Commander stated that the follow-on contract requires Boeing to use DLA as the preferred supplier for DLA-managed items that are determined to be the best value to the Government in terms of price, delivery, and quantity. Therefore, we would expect DLA to be the first source of supply for this part in FY 2013 and FY 2014 to realize additional savings of $984,559. No further comments are required.

e. Ensure that the follow-on contract does not include any clauses that would prevent the Army from obtaining economic order quantity pricing.

Department of the Army Comments

The Commander, AMCOM, agreed. He stated that the follow-on contract does not contain any clauses or language that would preclude the Army from obtaining economic order quantity pricing.

Our Response

The Commander, AMCOM, comments are responsive. No further comments are required.

f. Document reasons for Boeing manufacturing parts at significantly higher prices than what the prices would have been had the parts been purchased.

Department of the Army Comments

The Commander, AMCOM, stated that the recommendation does not require an agreement or disagreement, and provided details of the two sample parts that Boeing manufactured. Specifically, for NSN 3120-00-138-4083 (sample 3), the Commander stated that Boeing used a firm quote to establish prices for this part even though Boeing's system always coded this part as a make part. The Commander further stated that Boeing's supplier was unwilling to price these parts for 2007 through 2009, citing fluctuating steel prices; and therefore, Boeing revised its proposal using its estimate of the cost to make the item. The Commander commented that during review of the item, Boeing officials realized they had miscalculated the amount of raw material to manufacture the item, and therefore, submitted a refund to the Army. For NSN 1680-01-105-6441 (sample 206), the Commander stated that Boeing priced this part based on its manufacturing costs. He stated that the Boeing make-buy decision is a function of Boeing's production system, and not separate for each contract. The Commander also stated that the qualification of parts purchased by DLA would need to be explored in some detail before Boeing could commit to obtaining the parts from DLA.

Our Response

The Commander, AMCOM, comments are responsive. No further comments are required.

g. Determine whether the suppliers that produce the higher level assembly for national stock number 3120-00-138-4083 can use these parts as Government-furnished material and if not, determine whether it is more cost-effective to continue the repair program and use the Corpus Christi Army Depot inventory, Defense Logistics Agency inventory, and Boeing inventory valued at more than $2.2 million as part of the repair program.

Department of the Army Comments

The Commander, AMCOM, stated that the recommendation does not require an agreement or disagreement. The Commander also stated that the CCAD Chinook Horizontal Hinge Pin program was initially canceled based on the extensive time required to process these for repair through the depot. He stated that this was a business decision made by the AMCOM Integrated Materiel Management Center senior management to ensure the depot met readiness requirements. The Commander stated that AMCOM is providing pins as Government-furnished material to the partnership contract. He further stated that as the

inventory is drawn down, AMCOM will take action to determine if it is economically feasible to reinstate the processing of horizontal hinge pins at the depot and, if so, AMCOM will take action to drawdown sleeve bushing inventory.

Our Response

The Commander, AMCOM, comments are responsive. No further comments are required.

h. Negotiate a fixed-price incentive contract for the follow-on contract so both parties would benefit from Boeing negotiating lower prices with its suppliers.

Department of the Army Comments

The Commander, AMCOM, disagreed. The Commander stated that due to the extreme variations that regularly occur in the depot workload, a fixed-price incentive contract would create a tremendous administrative burden and increase the probability of inaccuracies in determining incentives earned. Instead, the Commander stated that the follow-on contract will include an incentive to reduce the material consumed in depot production and/or price of material, thereby reducing the total material cost to the depot.

Our Response

The Commander, AMCOM, comments are partially responsive. We recognize that a fixed-price incentive contract is more of an administrative burden. Although we believe that a fixed-price incentive contract would be best, another option would be to annually perform a cost analysis on a limited sample of high-risk, high-dollar value parts and make changes to prices as appropriate before exercising options. Our audit report on the partnership contract with The Sikorsky Aircraft Corporation will address the effectiveness of the material cost reduction clause in that contract.

In a meeting subsequent to receiving the Commander's comments, the Commander stated that AMCOM contracting officials will perform an annual review of a sample of high-risk, high-dollar parts to validate the individual prices before exercising follow-on orders. This action, in addition to the inclusion of the material incentive clause in the follow-on contract, meets the intent of the recommendation; therefore, no further comments are required.

i. Involve Boeing engineers in determining whether the direct selector sets and linear actuating cylinder pistons are nonconforming parts and address the expiration dates related to re-lubing bearings.

Department of the Army Comments

The Commander, AMCOM, agreed. The Commander stated that CCAD has initiated a Corrective Action Request identifying the non-conformance of lubing and packaging for bearings with recommended action required to correct the deficiencies. The Commander also stated that CCAD is coordinating with personnel from CCAD Quality and the Army Aviation and Missile Research Development Engineering Center to determine appropriate action regarding the direct selector sets and liner actuating cylinder pistons.

Our Response

The Commander, AMCOM, comments are responsive. No further comments are required.

j. Implement procedures to promptly notify Boeing and the Government regarding potential nonconforming parts.

Department of the Army Comments

The Commander, AMCOM, agreed. The Commander stated that the follow-on contract includes a clause to address non-conformance and misidentification of material. The Commander also stated that CCAD Path Forward will develop and implement a Letter of Instruction for processing and resolution of non-conforming material.

Our Response

The Commander, AMCOM, comments are responsive. No further comments are required.

B.3. We recommend that the Director, Defense Procurement and Acquisition Policy:

a. Require that the Army Aviation and Missile Life Cycle Management Command report on how inventory and pricing issues were improved on the follow-on contract.

Defense Procurement and Acquisition Policy Comments

The Director, Defense Procurement and Acquisition Policy, partially agreed with the draft report recommendation to form a rapid improvement team but stated that the team of logistics and pricing experts should be assembled and led by the Army. The Director stated that if the Army requires external support, his office will help them obtain expertise from DCMA, DCAA, and other Defense Components. The Director requested that this recommendation be redirected to the Army.

Our Response

The Director, Defense Procurement and Acquisition Policy, comments are partially responsive. The AMCOM Contracting Center definitized the follow-on contract on December 31, 2010. Therefore, instead of forming a rapid improvement team, the Director should require AMCOM officials to report to him on how they addressed the inventory and pricing problems in the contract. Therefore, we revised the recommendation and request that the Director provide additional comments on the revised recommendation in response to the final report.

b. Establish policy showing a clear preference for the use of fixed-price incentive contracts on all contracts exceeding $100 million (including option years) unless the Government objective price was developed by an experienced cost/price analysis group.

Defense Procurement and Acquisition Policy Comments

The Director, Defense Procurement and Acquisition Policy, partially agreed. The Director stated that he agrees that fixed-price incentive contracts should be used when appropriate and

will issue a policy memorandum reminding contracting officers to do so. However, the Director stated that a more appropriate solution is to ensure that adequate experienced pricing resources are available to support all procurements regardless of dollar value. He stated that he recently revised the Defense Federal Acquisition Regulation Supplement Policy, Guidance, and Information 215.404-2, "Information to support proposal analysis," to increase the thresholds for field pricing audits to $100 million for cost-type proposals and $10 million for fixed-price proposals. He stated that this will ensure that adequate DCAA audit resources are available for higher risk work. In addition, the Director stated that the Department is hiring a significant number of contract cost and price analysts, and accordingly, in the future, there should be only limited cases where adequate pricing and audit expertise is not available to analyze contractor proposals exceeding $100 million.

Our Response

Although the Director, Defense Procurement and Acquisition Policy, only partially agreed, his comments are responsive. No further comments are required.

Finding C. Payments for Unachieved Repair Turnaround Time Improvements

AMCOM officials overstated repair turnaround time (RTAT) improvements for Phase II of the CCAD/Boeing contract. AMCOM officials calculated a 46.7 percent performance improvement, but the actual RTAT performance improvement ranged from 26.1 percent to 36.9 percent.[26] Therefore, AMCOM officials paid Boeing for performance improvements that were not achieved. RTAT improvements were overstated because AMCOM officials used inconsistent methodologies to calculate the Phase II RTAT contract baseline. Specifically, baseline calculations included shiftwork, while the calculations for actual contractor performance were based on days, with no regard for shiftwork. In addition, AMCOM officials did not enforce the Phase III contract requirements for pursuing refunds when Boeing did not meet RTAT metrics. As a result, we calculated that AMCOM officials overpaid Boeing for Phase II RTAT improvements in the first 3 option years by $3.8 million to $8.4 million, and Boeing owes the Army a refund of $2.4 million for the fourth option year; for a total amount due to the Army of $6.3 million to $10.9 million.[27] Boeing also owes the Army an additional $538,688 for not meeting Phase III RTAT contract requirements.

AMCOM RTAT Expectations

The acquisition plan for the CCAD/Boeing contract listed achieving a 50 percent reduction in RTAT as one of the main goals of the partnership and stated that "in order to meet program requirements and reduce operation and support costs, it is necessary that a 50 percent reduction in RTAT be achieved." Furthermore, the acquisition plan stated that reduced RTAT would improve supply availability and provide for dollar savings in inventory, warehousing, and management. Specifically, AMCOM officials expected a one-time savings of $74 million due to a 50 percent reduction in RTAT. The business case analysis for the CCAD/Boeing contract also listed reductions in RTAT as a goal of the partnership; however, it cited higher expected cost savings in the "triple-digit millions" if Boeing achieved the 50 percent reduction in RTAT.

Contract Requirements Were Different From Baseline

The CCAD/Boeing contract included performance metrics for RTAT with the potential for Boeing to earn incentives annually if it reduced RTAT beyond the stated contract requirements. The contract also allowed for disincentives if Boeing did not meet the stated contract requirements. The RTAT reductions for Phase II components were to be evaluated separately from Phase III components.

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[26] Boeing and AMCOM officials provided conflicting data to support the contract RTAT baseline calculations. Original supporting documents used to develop the baseline were not available; therefore, we used both sets of data and identified RTAT improvements as a range from 26.1 percent to 36.9 percent.

[27] Totals are rounded.

Baseline Included Shiftwork for Phase II Components

Contract modification P00006, November 1, 2004, established the Phase II RTAT requirements. The requirement was for Boeing to assist CCAD in reducing RTAT by 50 percent by the end of the 5-year performance period, October 31, 2009. The contract did not include requirements for the base year but specified requirements for each of the 4 option years. The RTAT definition for Phase II programs was the average of calendar days from the date DLA delivered the component to be repaired to CCAD, to the date DLA picked up the repaired component from CCAD.

Different Methodologies for Baseline and Actual Performance

The contract baseline for Phase II RTAT was 212 days. This figure was based on data compiled from November 1, 2000 through October 31, 2004, and was calculated by dividing the total number of cycle days worked on roughly 44 CCAD repair programs by the quantity of end parts produced. Cycle days were calculated as the total number of repair days per end part multiplied by the number of shifts reportedly worked by CCAD personnel. For example, if it took 250 days to repair an end part and during that time CCAD personnel worked two shifts, the number of cycle days used in the RTAT formula would be 500 days. However, AMCOM officials used a different methodology to calculate the actual contractor performance than it used for the baseline. AMCOM officials excluded all shiftwork from the calculation of actual contractor performance, even though according to the CCAD line managers that we interviewed, multiple shifts and overtime were still being worked on Phase II repair programs during the performance period of the CCAD/Boeing contract. The line managers also stated it would have been difficult to determine when multiple shifts were used for the repair programs in the baseline calculation.

Table 23 shows an example of the baseline data that were evaluated for repairs that DLA delivered to CCAD and accepted as repaired from CCAD from May 2002 through August 2004 for NSN 1680-01-232-0038, a gearbox assembly used on the Apache helicopter. According to the baseline data, two shifts were always worked on this program during that time period. As shown in Table 23, when shifts were accounted for, the RTAT was 168 days. However, if AMCOM officials were using this data to determine actual performance, shifts would have been ignored, and the RTAT would be only 84 days.

Table 23. Multiple Shifts Could Double the Baseline RTAT

	Quantity	Average Repair Days	Total Repair Days	Shifts	Total Cycle Days	RTAT
Baseline	53	84	4,452	2	8,904	168
Actual	53	84	4,452	0	4,452	84

Contract Baseline Compared to Boeing Performance

AMCOM officials reported a significant improvement in RTAT after the base year of the contract using the inconsistent methodology between the baseline and actual contractor performance RTAT calculations. Specifically, actual contractor performance during the base year was 105 days instead of the contract baseline of 212 days; a 50.5 percent improvement. However, the contract did not provide for incentive payments in the base year of the contract.

By the end of the 5-year performance period, the reported RTAT improvement had decreased slightly to 46.7 percent. As shown in Table 24, AMCOM calculations show a 43.4 percent RTAT improvement in the first option year and only a 46.7 percent improvement by the fourth option year.[28]

Table 24. Phase II Contract Requirements and Boeing Performance Reported by AMCOM

	Baseline	First Option Year		Second Option Year		Third Option Year		Fourth Option Year[1]	
		Days	%[2]	Days	%	Days	%	Days	%
Contract Requirement	212	197	7.0	170	20.0	138	35.0	106	50.0
Actual Performance		120	43.4	117	44.8	116	45.3	113	46.7
Performance Improvement Over Required Minimum			39.1		31.2		15.9		(6.6)

[1]RTAT data for the fourth option year were compiled only through April 30, 2009.
[2] Percentages are cumulative.

DoD IG Revised Baseline Compared to Boeing Performance

The methodologies for calculating the RTAT baseline and actual contractor performance need to be consistent. By applying shiftwork adjustments to the baseline and not to actual contractor performance, the baseline was overstated. Therefore, we recalculated the Phase II RTAT baseline to exclude the shiftwork adjustment, consistent with how AMCOM officials calculated actual contractor performance. Using baseline data provided by Boeing, we eliminated shiftwork from the baseline calculation, which lowered the Phase II RTAT baseline to 153 days instead of 212 days in the contract.

Keeping the same required annual percentage reduction requirements for RTAT improvement that were detailed in the contract, we determined that Boeing improved RTAT by 26.1 percent over the performance period versus the 46.7 percent improvement using the overstated baseline. The improvement in the first option year was still significant, 21.6 percent, but about half of what AMCOM officials reported using the overstated baseline.

[28] AMCOM officials compiled RTAT performance data for Phases II and III only through April 30, 2009, instead of the contract required date of October 31, 2009, because of the implementation of LMP. Therefore, the reported actual contractor performance data for the fourth option year is only for half of the year.

If the baseline had been calculated consistently, Boeing would not have met contract requirements in the third and fourth option years, as shown in Table 25.

Table 25. Phase II Contract Requirements and Boeing Performance With the DoD IG Revised Baseline

	DoD IG Baseline	First Option Year		Second Option Year		Third Option Year		Fourth Option Year[1]	
		Days	%[2]	Days	%	Days	%	Days	%
Contract Requirement	153	142	7.0	122	20.0	99	35.0	77	50.0
Actual Performance		120	21.6	117	23.5	116	24.2	113	26.1
Performance Improvement Over Required Minimum			15.5		4.1		(17.2)		(46.8)

[1] RTAT data for the fourth option year were compiled only through April 30, 2009.
[2] Percentages are cumulative.

Revised AMCOM Baseline Compared to Boeing Performance

In response to a discussion draft report, AMCOM officials stated that Boeing provided us incomplete baseline data. AMCOM officials also stated that the data provided by Boeing were manually entered and that the system used to track RTAT had additional baseline data. AMCOM officials eliminated shiftwork from the revised baseline data and calculated that the contract baseline should have been 179 days. Using the revised AMCOM baseline, we determined that Boeing improved RTAT by 36.9 percent over the contract performance period. Boeing would not have exceeded the contract requirements in the third option year and would not have met the contract requirements in the fourth option year, as shown in Table 26.

Table 26. Phase II Contract Requirements and Boeing Performance With the Revised AMCOM Baseline

	AMCOM Baseline	First Option Year		Second Option Year		Third Option Year		Fourth Option Year[1]	
		Days	%[2]	Days	%	Days	%	Days	%
Contract Requirement	179	166	7.0	143	20.0	116	35.0	90	50.0
Actual Performance		120	33.0	117	34.6	116	35.2	113	36.9
Performance Improvement Over Required Minimum			27.7		18.2		0.0		(25.6)

[1] RTAT data for the fourth option year were compiled only through April 30, 2009.
[2] Percentages are cumulative.

Baseline Did Not Include Shiftwork for Phase III Components

Contract modification P00036, June 19, 2006, established the Phase III RTAT requirements. The requirement was to reduce RTAT by 35 percent by October 31, 2009. The contract did not include requirements for the base and first option year, but specified requirements for the second, third, and fourth option years. The RTAT definition for Phase III programs was the weighted average of calendar days from the date of DLA delivery of the component to be repaired to CCAD, to DLA pickup of the repaired component from CCAD.

The contract baseline for Phase III RTAT was 121 days. This figure was based on data compiled from October 1, 2003 through December 31, 2005, for roughly 119 CCAD repair programs. AMCOM officials calculated the baseline and actual contractor performance consistently for the Phase III programs; therefore, we did not recalculate the baseline as we did for the Phase II programs. As shown in Table 27, Boeing improved RTAT for Phase III programs by 18.2 percent over the 3 option years, but did not meet the contract requirements for any of the option years. In fact, actual contractor performance during the second option year was below the baseline.

Table 27. Phase III Contract Requirements and Boeing Performance

	Baseline	Second Option Year		Third Option Year		Fourth Option Year[1]	
		Days	%[2]	Days	%	Days	%
Contract Requirement	121	113	7.0	97	20.0	79	35.0
Actual Performance		123	(1.7)	114	5.8	99	18.2
Performance Improvement Over Required Minimum			(8.9)		(17.5)		(25.3)

[1] RTAT data for the fourth option year were compiled only through April 30, 2009.
[2] Percentages are cumulative.

Incorrect Incentive Payments

After CCAD and Boeing agreed on the final RTAT reduction determination, the contracting officer and Boeing were to identify the appropriate incentive achieved. Incentive payments (awards or refunds) were based on a comparison of the actual contractor performance to the contract requirements. Specifically, the contract stated:

> For each percent of reduction achieved above the minimum RTAT (based on the aggregate performance for all parts in the qualified population) Boeing will receive an amount equaled to that percentage applied against the value of the material CLIN(s) [contract line item number(s)] of the specific Phase of contract for that same performance period not to exceed a maximum of 5.25 percent for Phase II and +/- 3 percent for Phase III. For each percentage of reduction below the minimum RTAT, Boeing's profit shall be reduced downward not to exceed a maximum reduction of 5.25 percent for Phase II and +/- 3 percent for Phase III.

Incorrect Payments for Phase II Performance

Boeing was to receive an incentive payment of up to 5.25 percent of the material costs for each percent achieved above the contract requirement. However, the opposite was also true, and for every percent below the contract requirement, Boeing would owe a refund of up to 5.25 percent of the material costs. AMCOM officials paid Boeing incentive payments for Phase II performance during the first 3 option years of the contract. However, Boeing did not always achieve RTAT improvements above the contract requirement. Table 28 summarizes the percent improvement over the required minimum that Boeing achieved using the inconsistent contract baseline, which included shiftwork, and the DoD IG and AMCOM revised baselines, which eliminated shiftwork.

Table 28. Percent Improvement Over Required Minimum

Option Year	Contract Baseline (212 Days)	AMCOM Revised Baseline (179 Days)	DoD IG Revised Baseline (153 Days)
1	39.1	27.7	15.5
2	31.2	18.2	4.1
3	15.9	0.0	(17.2)
4*	(6.6)	(25.6)	(46.8)

* RTAT data for the fourth option year were compiled only through April 30, 2009.

AMCOM officials paid Boeing $9.7 million in incentive payments related to the overstated RTAT improvements for the first 3 option years. However, using the DoD IG and AMCOM revised baselines, AMCOM officials should have paid Boeing only $1.2 million to $5.8 million. Therefore, AMCOM officials paid Boeing about $3.8 million to $8.4 million in contract incentives for RTAT improvements that were not achieved during the first 3 contract option years, as shown in Table 29.

Table 29. Phase II RTAT Incentive Payments/Refunds

Option Year	Payment or (Refund)			Amount Due to Army	
	Actual	AMCOM Revised	DoD IG Revised	AMCOM Revised	DoD IG Revised
1	$2,389,379	$2,389,379	$2,389,379	$ 0	$ 0
2	3,449,437	3,449,437	2,693,846	0	755,591
3	3,835,367	0	(3,835,367)	3,835,367	7,670,734
Subtotal	**$9,674,183**	**$5,838,816**	**$ 1,247,858**	**$3,835,367**	**$ 8,426,325**
4*	0	(2,441,791)	(2,441,791)	2,441,791	2,441,791
Total	**$9,674,183**	**$3,397,025**	**$(1,193,933)**	**$6,277,158**	**$10,868,116**

* RTAT data for the fourth option year were compiled only through April 30, 2009. Therefore, we based our incentive payment calculation on the data that existed for the first half of the fourth option year. As of November 9, 2010, AMCOM officials had not paid any incentives to Boeing for the fourth option year.

Using actual contractor performance data for the first half of the fourth option year, Boeing would not have met the contract requirements using either the overstated contract baseline or the revised AMCOM and DoD IG baselines. According to the CCAD/Boeing Contract Liaison, Boeing stated that it would have met the RTAT performance requirements for the fourth option year had the entire year of performance been tracked. However, actual contractor performance had improved by only 5.8 percent from the end of the first option year through the middle of the fourth option year (decreased from 120 days to 113 days). Therefore, indications are that Boeing would have missed the contract requirement by more than 5.25 percent for the fourth option year. We calculated that Boeing would owe the Army $2.4 million for the fourth option year, as shown in Table 29.

Because the RTAT contract baseline and actual contractor performance were calculated inconsistently, AMCOM officials overpaid incentives to Boeing by $3.8 million to $8.4 million for the first 3 option years of the contract, based on the overstated baseline. In addition, using actual contractor performance data for the first half of the fourth option year, we calculated that Boeing owes the Army an additional refund of $2.4 million, for a total of $6.3 million to $10.9 million[29] for Phase II RTAT performance. *The contracting officer should request payment from Boeing for the $3.8 million to $8.4 million overpayments associated with the RTAT performance and finalize negotiations with Boeing to determine the appropriate refund for the fourth option year.* [Recommendations C.1 and C.2]

Refunds Not Requested for Phase III Performance

For the Phase III programs, Boeing was to receive an incentive payment or pay a refund of up to 3.0 percent of the material costs for each percent achieved above or below the contract requirement. However, AMCOM officials did not conform to the contract in relation to Phase III RTAT performance. As previously discussed in Table 27, Boeing did not meet any of the contract requirements for Phase III RTAT performance. Therefore, AMCOM officials should have pursued a refund from Boeing in the amount of 3.0 percent of material costs for the second and third option years. However, AMCOM officials did not pursue $382,694 in refunds from Boeing for not meeting Phase III RTAT requirements. Furthermore, indications are that Boeing would have also missed the Phase III contract requirement for the fourth option year by more than 3.0 percent. Boeing owes the Army a refund of $382,694 for not meeting RTAT contract requirements in the second and third option years. Using the actual contractor performance data and material costs reported through April 30, 2009, we calculated that Boeing would also owe the Army $155,994 for the fourth option year, for a total of $538,688.

[29] Totals are rounded.

Table 30 shows that Boeing did not improve RTAT performance during Phase III of the contract and, therefore, owes the Army $382,694 for the first 3 option years and an additional $155,994 for the fourth option year.

Table 30. Phase III RTAT Incentive Payments/Refunds

Option Year	Percent Improvement Over Required Minimum	Actual Payment (Refund)	DoD IG Calculated Payment (Refund)	Amount Due to Army
2	(8.9)	$0	$ (95,690)	$ 95,690
3	(17.5)	0	(287,004)	287,004
Subtotal		**$0**	**$(382,694)**	**$382,694**
4*	(25.3)		(155,994)	155,994
Total		**$0**	**$(538,688)**	**$538,688**

* RTAT data for the fourth option year were compiled only through April 30, 2009. Therefore, we based our incentive payment calculation on the data that existed for the first half of the fourth option year. As of November 9, 2010, AMCOM officials had not paid any incentives to Boeing for the fourth option year.

The contract states that "for each percentage of reduction below the minimum RTAT, Boeing's profit shall be reduced downward . . .". Therefore, AMCOM officials should have pursued a refund of $382,694 from Boeing or reduced Phase II incentive payments to Boeing by the same amount for not meeting Phase III RTAT contract requirements in the second and third option years. *The contracting officer should request a refund of $382,694 from Boeing.* [Recommendation C.1] In addition, using actual contractor performance data for the first half of the fourth option year, we calculated that Boeing owes the Army an additional refund of $155,994, for a total of $538,688 for Phase III RTAT performance. *The contracting officer and Boeing need to finalize negotiations to determine the appropriate refund for the fourth option year*. [Recommendation C.2] We are not making a recommendation to initiate an administrative review of AMCOM officials because the original AMCOM officials who established the RTAT methodology are no longer with the program. In addition, the follow-on CCAD/Boeing contract does not include RTAT performance metrics or incentive payments.

Recommendations, Management Comments, and Our Response

C. We recommend that the Commander, Army Aviation and Missile Life Cycle Management Command, instruct the contracting officer to:

1. Request a refund of $4.2 million ($3,835,367 plus $382,694) to $8.8 million ($8,426,325 plus $382,694) from Boeing for overpayments on Phase II programs and for not meeting contract requirements on Phase III programs during the first 3 option years.

Department of the Army Comments

The Commander, AMCOM, disagreed, stating that the Army does not agree that Boeing owes a refund for this portion of the contract. Specifically, the Commander stated that a manual review process, instead of an automated process, was used to establish the RTAT

baseline at the beginning of the contract, and experienced depot personnel applied judgment factors in developing the baseline of 212 days. The Commander also stated that a review of automated system data, excluding shifts, indicates a valid baseline of 179 days. In addition, the Commander stated that using the 179 day baseline does not support obtaining a refund from Boeing for years 1 through 3, but establishes an incentive due to Boeing of almost $10 million based on the established contract terms. He further stated that the contract terms state that the RTAT reduction percentage should be applied against the value of the material contract line item. The Commander stated that the $9.7 million incentive AMCOM officials paid to Boeing for the first 3 option years, which was based on material sold versus the value of the material contract line item, is less than the revised calculation; and therefore, Boeing does not owe the Army a refund.

Our Response

The Commander, AMCOM, comments are not responsive. We disagree with the Commander's calculation of an incentive payment of $10 million for the first 3 option years. In the memorandum for record dated December 14, 2006, for the initial incentive payment, the contracting officer stated that although Boeing assumed that the RTAT incentive would be paid based on the total material contract line item, the Army "informed Boeing that they were not willing to incentivize them on parts not ordered or sold." Similarly, in the memorandum for record dated May 20, 2008, for the second option year incentive payment, the contracting officer told Boeing that AMCOM was "not willing to incentivize on excess material," based on the fact that AMCOM had to buy back excessive material. Now that the contract baseline has been decreased from 212 days to 179 days, the Commander states that Boeing should be paid on the entire material contract line item. The Commander's comments contradict the contracting officer's position of calculating the incentives against only material sold during the first 3 option years. The Commander also did not address Boeing not meeting contract requirements for Phase III programs. We request that the Commander reconsider his position and provide additional comments in response to the final report.

2. Negotiate with Boeing to determine the appropriate refund for not meeting repair turnaround time contract requirements for Phase II and Phase III programs during the fourth option year calculated at $2.6 million ($2,441,791 plus $155,994).

Department of the Army Comments

The Commander, AMCOM, did not agree or disagree and stated that a detailed review of the fourth option year incentive data is in process. The Commander stated that verifiable data available for only 6 months of the year does not provide an accurate determination as to Boeing's potential to achieve the contract RTAT reductions. He stated that the review should be completed by March 31, 2011.

Our Response

The Commander, AMCOM, comments are responsive. AMCOM is reviewing available data for the fourth option year to determine the RTAT incentive payment or refund, which meets the intent of the recommendation. As of the date of this report, the review had not been completed. We request that the Commander, AMCOM, provide us with the results of the review when completed.

Finding D. Splitting Requirements for Consumable Items Was Not Cost-Effective

The CCAD/Boeing contract was splitting instead of consolidating procurement and material sustainment responsibilities for consumable items. Consequently, Boeing and either DLA or the Army were procuring and managing the same items. Specifically, Boeing was responsible for procuring and managing consumable items used at CCAD (includes depot-only and depot-and-field replaceable items); while either DLA or the Army had responsibility for procuring and managing consumable items to meet field-use requirements or foreign military sales. This occurred because:

- the Army and DLA had not developed an effective procurement and material management strategy that addressed the most cost-effective source of supply for consumable items; and

- DoD had inadequate policies and procedures for consolidating procurement and management responsibilities for consumable items, and the strategy of using different sources to procure and manage the same items clearly reduced the ability to obtain economic order quantities and increased overall procurement and material management costs.

As a result, the procurement and material management consolidation goals and associated savings of the consumable item transfer of the 1990s and the 2005 BRAC supply and storage recommendations were not being achieved. The CCAD/Boeing contract was basically contracting out the DLA mission and will decrease competition and the effective use of DLA assets, increase excess capacity, and make DLA increasingly more inefficient, unless DoD develops an effective strategy to procure and manage consumable items. Using the DoD EMALL, we identified that DLA had sufficient inventory to satisfy annual contract requirements for 1,635 parts on the follow-on CCAD/Boeing contract and that the contract price for these parts was $8.0 million, or 51.2 percent, higher than the DLA price. We identified another 431 parts in which the contract price was $10.0 million, or 43.2 percent, higher than the DLA price, but DLA did not have enough inventory to meet contract requirements. We also identified 757 parts in which the contract price was $14.4 million less than the DLA price. In addition, from 2007 through 2009, Boeing made an excessive 35 percent profit on $3.1 million of spare parts purchases from DLA for CCAD requirements.

Consolidation Goals for Consumable Items Not Being Met

The intent of the inventory control point consolidation and the 2005 BRAC supply and storage recommendations were to make DLA the single, integrated consumable item procurement manager to leverage DoD's buying power. However, the CCAD/Boeing contract was splitting instead of consolidating procurement and material sustainment responsibilities for consumable items. Consequently, Boeing and either the Army or DLA were procuring and managing the same items. Using more than one entity to supply the

same parts is contradictory to the consolidation goals of the consumable item transfer of the early 1990's and the 2005 BRAC supply and storage recommendations.

Consumable items are identified as not economically repairable but used and discarded when worn out or broken. Consumable items include common usage, low-cost supplies and minor parts; such as gaskets, materials, and fasteners; and high-priced, sophisticated spare parts; such as precision valves, micro switches, and miniature components that are vital to operating major weapon systems.

Consolidation of Inventory Control Points

Historically, DLA and the Services had inventory control points managing consumable items. On July 3, 1990, the Deputy Secretary of Defense approved the recommendation in Defense Management Report Decision 926, "Consolidation of Inventory Control Points," to transfer item management responsibility for approximately one million consumable items from the Services to DLA. The report concluded that the transfer of consumable items to DLA was both cost-effective and desirable, and would produce estimated recurring annual savings of between $45 million to $49 million (FY 1989 dollars) beginning in FY 1995. The intent of the transfer was to consolidate the management of consumable items based on the premise that DLA could manage the items with fewer resources than the Services. Consolidating the Services requirements would also enable DoD to achieve economic order quantities when procuring consumable items. The consolidation was also designed to eliminate the duplicate management of consumable items within DoD.

2005 BRAC Recommendations

The supply and storage recommendations of the 2005 BRAC were generally in line with the intentions of the consumable item transfer during the early 1990's. Specifically, the 2005 BRAC recommendations directed the Services to realign or relocate management and related support functions for the procurement of depot-level repairables to DLA and to relocate consumable item management to DLA to consolidate missions and reduce excess capacity. The realignment was designed to make DLA the single, integrated Army item and DLA consumables procurement manager to leverage DoD's buying power. The 2005 BRAC recommendations suggest consolidating requirements of certain items to DLA by September 30, 2011. 2005 BRAC Recommendation #176, "Depot-Level Repairable Procurement Management Consolidation," relates to procuring and managing aviation depot-level repairables and consumable items and realigning functions from AMCOM to DLA. Specifically, Recommendation #176 states:

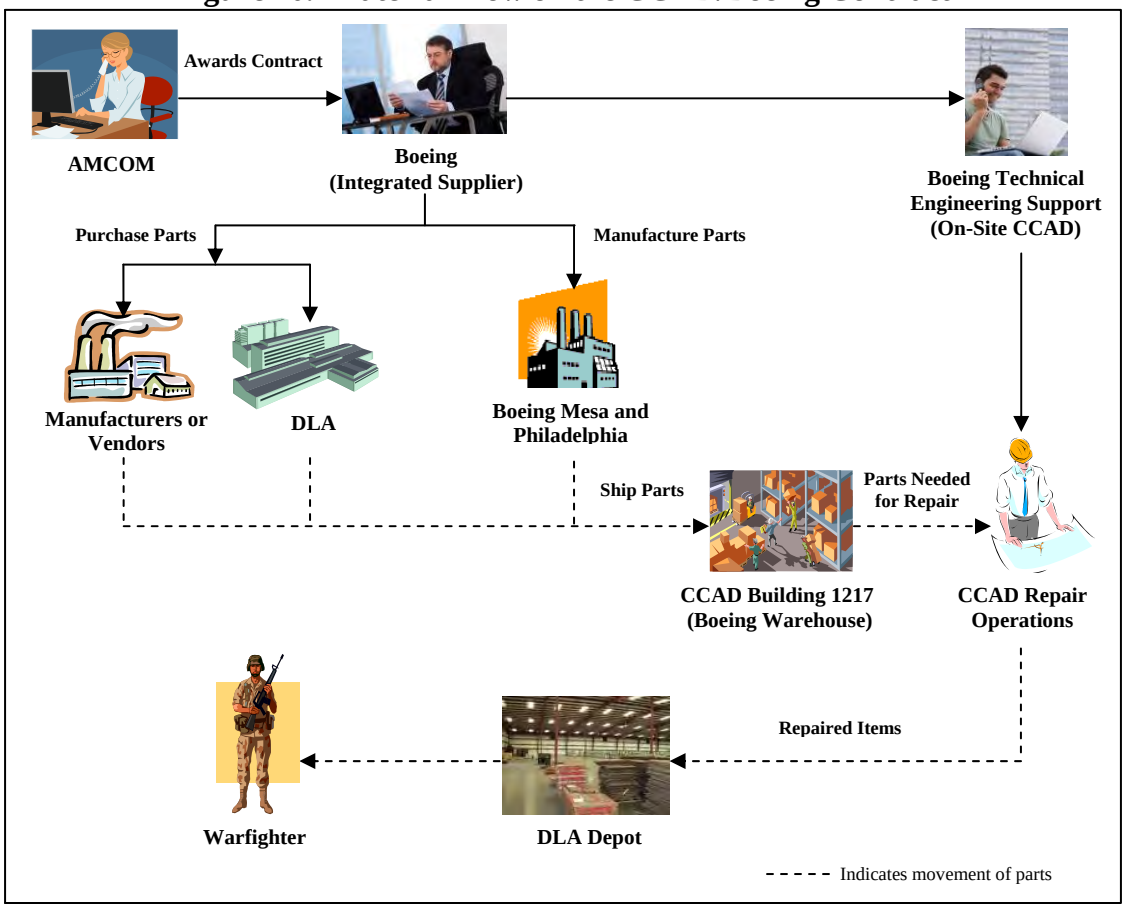
> Realign Redstone Arsenal, AL, as follows: relocate the Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, and Integrated Materiel Management Technical Support Inventory Control Point functions for Aviation Consumable Items to Defense Supply Center Richmond, VA, and reestablish them as Defense Logistics Agency Aviation Inventory Control Point functions; disestablish the procurement management and related support functions for Aviation depot-level repairables and designate them as Defense Supply Center Richmond, VA, Aviation Inventory Control Point functions; . . .

CCAD/Boeing Contract Acquisition Strategy

The April 28, 2004, justification and approval for other than full and open competition on the CCAD/Boeing contract stated that there was no procurement history available on an integrated effort for services and parts to support CCAD in the overhaul and repair of the Apache and Chinook weapon systems. Historically, parts were procured by placing individual orders, through sole-source or competitive procedures, with contractors based on material requisitions by CCAD. The justification and approval stated that an integrated effort of material, engineering, and technical services was required in order for the depot to gain capacity as it focused on production processes and improved aircraft readiness. It further stated that AMCOM and other DoD suppliers would continue to support customers other than CCAD, including field units, foreign military sales customers, specialized repair activities, and other Services through the normal supply system, using individual orders on a sole-source or competitive basis. The December 23, 2009, justification and approval for other than full and open competition on the follow-on CCAD/Boeing contract also states that AMCOM and DLA would continue to serve as the National Inventory Control Point using traditional support methods for customers other than CCAD.

Figure 20 shows the material flow on the CCAD/Boeing contract. Under the contract, Boeing was responsible for supplying consumable items to meet depot requirements at CCAD (includes depot-only and depot-and-field replaceable items).

Figure 20. Material Flow on the CCAD/Boeing Contract

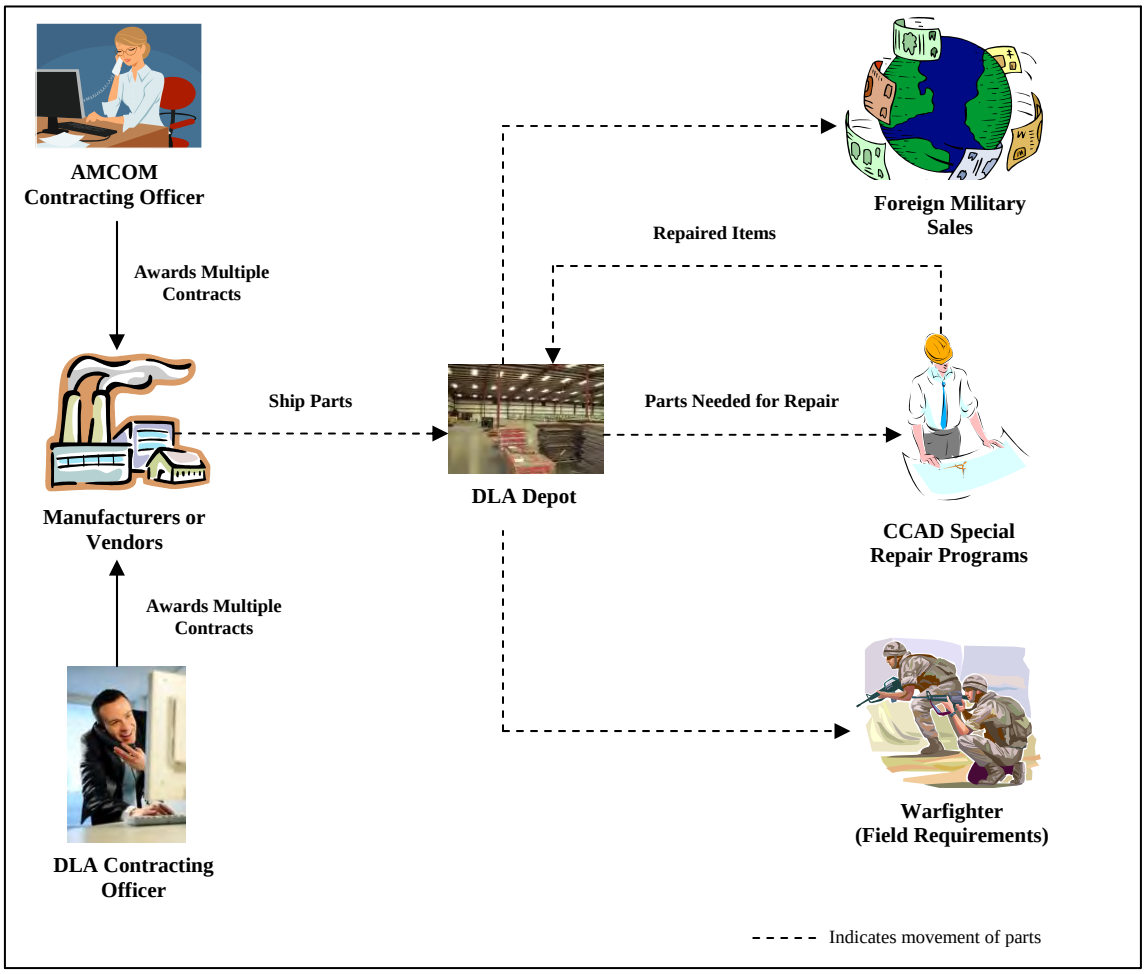


AMCOM and DLA Purchases

Historically, either AMCOM or DLA procured different consumable items that were used to meet CCAD, depot-replaceable, field-replaceable, and foreign military sales requirements. AMCOM officials notified DLA in February 2004 that it intended to bundle the CCAD requirements for the overhaul of the Apache and Chinook weapon systems. However, DLA would still procure the field-replaceable items and satisfy those requirements for field users. Meanwhile, in addition to the items that AMCOM procured on the CCAD/Boeing contract to meet depot requirements, AMCOM officials continued to procure the same items to meet its responsibility for field users, foreign military sales, and other needs, such as special repair programs.

Figure 21 shows the material flow for the consumable items managed by either AMCOM or DLA to meet field replaceable, foreign military sales, and other requirements, such as special repair programs.

Figure 21. AMCOM and DLA Purchases



DoD Needs an Effective Strategy for Procuring Consumable Items

DoD did not have an effective material management strategy for consumable items that promotes economic order quantities and competition between contractors and DLA. The consumable items transfer and the 2005 BRAC recommendations were supposed to give more buying leverage to DLA through the transfer of procurement management and related support functions. However, because Boeing, AMCOM, and DLA were procuring different quantities of the same items, leverage cannot be fully realized.

Economic Order Quantities

Procuring items in economic order quantities is a statutory requirement. Specifically, 10 U.S.C. § 2384a, "Supplies: economic order quantities," states that agencies must procure supplies in such quantity that will result in the most advantageous total cost and unit cost and does not exceed the quantity reasonably expected to be required by the agency. Having more than one entity procuring the same parts generally is not a best business practice and frequently does not allow DoD to take advantage of economic order quantities. Table 31 shows some additional examples of our sample items in which economic order quantities affect prices. Finding B also shows numerous examples of economic order quantity issues.

Table 31. Procuring Economic Order Quantities Would Save DoD Money

Sample Number	2009 Boeing Contract Quantity	Boeing Unit Price	Historical Procurement Quantity	Historical Unit Price*	Price Difference (percent)
DLA Price Was More Than Boeing Contract Price					
46	2,400	$ 237.45	155	$ 458.96	93.3
62	960	564.67	25	2,693.95	377.1
262	120	1,079.94	58	2,855.29	164.4
Boeing Contract Price Was More Than DLA Price					
344	11	13,751.02	72	6,797.61	102.3
356	207	367.98	766	134.30	174.0
361	9	15,770.17	50	5,107.02	208.8

* Includes DLA cost recovery rate.

Using the DoD EMALL is a Valuable Pricing Tool and Can Stimulate Competition Between DLA and Boeing

We compared the 2010 prices on the follow-on CCAD/Boeing contract with 2010 DoD EMALL prices (DLA standard unit price). We identified 1,635 parts on the follow-on contract that cost $23.6 million, but the DLA price was only $15.6 million; a difference of $8.0 million or 51.2 percent (186.2 percent median) and DLA had sufficient inventory of the parts to satisfy annual contract requirements. The median difference was 186.2 percent primarily because many of the parts had economic order quantity issues and many were low-dollar parts. For example, the DoD EMALL shows that for NSN 5315-00-823-8682, a straight pin, DLA annual consumption was 603 and DLA had 37,352 on hand at a standard

unit price of $0.04, while the 2010 CCAD/Boeing contract requirement was 3 pins at a unit price of $71.01, or a 177,475.0 percent difference. We see no reason for Boeing not to procure these items from DLA to meet CCAD requirements. We identified another 431 parts priced at $33.2 million, but the DLA price was only $23.2 million; a difference of $10.0 million or 43.2 percent (76.9 percent median). However, DLA did not have enough inventory to meet contract requirements. We also identified 757 parts for which the contract price was only $24.7 million, and the DLA price was $39.1 million; a difference of $14.4 million or 58.1 percent (43.8 percent median). AMCOM officials could make a case to procure these parts from Boeing after excess DLA inventory is depleted. As shown in Table 32, DLA had thousands of parts in inventory that could satisfy CCAD/Boeing contract requirements at significantly lower prices.

Table 32. Parts in DLA Inventory That Could Satisfy CCAD Requirements
($ in millions)

Description	Number of NSNs	DLA Inventory	2010 Total Price		Difference	
			Contract	DLA	Amount	Percent
DLA had sufficient inventory to satisfy annual contract requirements						
Contract unit price is higher than DLA price	1,635	$ 64.3	$ 23.6	$15.6	**$ 8.0**	**51.2**
					Median	186.2
DLA had insufficient inventory to satisfy annual contract requirements						
Contract unit price is higher than DLA price	431	7.8	33.2	23.2	**$10.0**	**43.2**
					Median	76.9
DLA price is higher than contract unit price	757	56.1	24.7	39.1	**$14.4**	**58.1**
					Median	43.8
Comparable data were not available	1,166	12.8	28.0			
Total	**3,989**	**$141.0**	**$109.5**			

The DoD EMALL was an extremely effective tool in performing a basic price analysis of contract prices and determining whether DLA had the best price and sufficient inventory to meet contract requirements or whether the contractor had a better price. DoD needs to adopt a strategy that allows DLA to compete with contractors for the Services' requirements. Using the DoD EMALL would have also highlighted many of the pricing problems identified in Finding B. *The Director, Defense Procurement and Acquisition Policy, needs to alert the acquisition community of the value of the DoD EMALL for performing basic price analyses.* [Recommendation D.1.a – Internal Control] The Services also appear to be moving supply operations and material management functions for consumable items from DLA to the private sector. *Therefore, the Director needs to issue*

DoD needs to adopt a strategy that allows DLA to compete with contractors for the Services requirements.

guidance that requires the Services to use the DoD EMALL to evaluate prices for consumable items on contractor logistics support and performance-based logistics contracts to determine whether those parts could be supplied by DLA at lower prices. In addition, the Director needs to develop a strategy to use DLA as the first source of supply when cost-effective and practical. [Recommendation D.1.b – Internal Control]

Boeing Already Purchased Consumable Items From DLA

The CCAD/Boeing contract encouraged Boeing to use DLA as a source of supply. Specifically, contract section H-28, "Government Source of Supply," stated:

> Boeing is encouraged to utilize Defense Logistics Agency (DLA) as the preferred supplier for DLA managed items that are determined to be the best value to the Government in terms of price, delivery, and quality. Any acquisitions from DLA will be a direct transaction between Boeing and DLA.

According to data provided by Boeing, Boeing procured $3.1 million in parts from DLA to satisfy CCAD contract requirements from 2007 through 2009. Because of the nature of the firm-fixed-price contract, Boeing charged the Army the negotiated contract price for the parts, regardless of the price Boeing paid DLA for the parts. Therefore, Boeing charged the Army $4.2 million for the parts. The Boeing CCAD Partnership Program Manager stated that Boeing profited on some purchases from DLA and suffered losses on others. However, based on the data Boeing provided us, Boeing made a 35 percent profit on the parts that it bought from DLA. Consequently, Boeing, not the Army, profited when DLA was used as the source of supply. AMCOM officials need to use the DoD EMALL and compare CCAD/Boeing follow-on contract prices with DLA standard unit prices and determine the most cost-effective source of supply.

AMCOM officials need to include a contract clause that addresses an appropriate markup on items that Boeing obtains from DLA and negotiate an appropriate refund for the $1.1 million profit that Boeing made on purchases from the DLA. [Recommendation D.2.a] The *AMCOM contracting officer also needs to include a contract clause that requires Boeing to use DLA as the first source of supply when cost-effective and practical.* [Recommendation D.2.b]

Management Comments on the Finding and Our Response

Department of the Army Comments

The Commander, AMCOM, stated that Department of the Army/AMC policy requires a business case analysis in order to support procurement of items outside of the normal inventory control point designation and, in accordance with the requirement, AMCOM validated a business case analysis to support the partnership arrangement. The Commander also stated that the business case analysis projected savings based on a RTAT reduction, increased parts availability, improved processes, enhanced performance, reduced acquisition cycle time, and improved readiness and reliability. The Commander stated that the partnership has achieved these goals. Specifically, he stated that the partnership has met the goals of reducing RTAT in that a minimum of 36 percent RTAT reduction was achieved. He stated that this was achieved through increased parts availability and improved processes,

and contributed to a readiness increase of 10.9 percent for both the Apache and Chinook platforms. The Commander also stated that the business case analysis established DLA as a preferred provider for DLA-managed items that were determined to be the best value to the Government in terms of price, delivery, and quality. However, he stated that there are issues with DLA support because that the partnership concept requires buying ahead of demand and DLA's business model does not currently support this concept. The Commander further stated that Boeing projects items/quantities required and buys ahead of demand to support the depot production schedule.

Our Response

As a result of this audit, the Office of the Secretary of Defense and the Department of the Army have issued policy memoranda addressing the use of existing inventories (Army and DLA items) before procuring items from commercial supply sources. Additionally, the memorandum of agreement that is being established between the AMCOM Integrated Materiel Management Center, CCAD, DLA, and Boeing should alleviate the Commander's issues with DLA support because the memorandum will require DLA to set aside available inventory for use on the partnership contract.

Recommendations, Management Comments, and Our Response

D.1. We recommend that the Director, Defense Procurement and Acquisition Policy:

a. Alert the acquisition community of the value of the DoD EMALL for performing basic price analyses.

Defense Procurement and Acquisition Policy Comments

The Director, Defense Procurement and Acquisition Policy, agreed and stated that he will issue a policy memorandum advising the acquisition community of the value of the DoD EMALL for conducting market research.

Our Response

The Director, Defense Procurement and Acquisition Policy, comments are responsive, and no further comments are required. We agree with the Director's plan to issue a policy memorandum regarding the value of the DoD EMALL. However, we also believe that the DoD EMALL is a valuable tool that should be used beyond market research, such as when prime contractors and responsible Government officials are performing price analyses and researching inventory levels.

Department of the Army Comments

Although not required to comment, the Commander, AMCOM, stated that the AMCOM acquisition community is aware of the DoD EMALL and reviews the data in the system. The Commander stated that the DoD EMALL is one tool available in conducting price analysis on material and can be used in conjunction with other price analysis techniques.

Our Response

We agree that the DoD EMALL is just one tool that can be used for price analysis; however, it is important for AMCOM to include this step in its approved analysis methodologies so that it is not overlooked.

b. Issue guidance that requires the Services to use the DoD EMALL to evaluate prices for consumable items on contractor logistics support and performance-based logistics contracts to determine whether those parts could be supplied by Defense Logistics Agency at lower prices and develop a strategy to use the Defense Logistics Agency as the first source of supply when cost-effective and practical.

Defense Procurement and Acquisition Policy Comments

The Director, Defense Procurement and Acquisition Policy, agreed. As stated in response to Recommendation D.1.a, the Director will issue a policy memorandum discussing the value of the DoD EMALL. The Director also stated that in accordance with existing policy, he will direct the Services to use on hand and due-in Government inventory. He also stated that stocking objectives should be adjusted accordingly if the performance-based logistics or contractor logistics support acquisition strategy results in a determination that use of a commercial source is more effective than relying on Government material.

Our Response

The Director, Defense Procurement and Acquisition Policy, comments are responsive, and no further comments are required. The December 20, 2010, Office of the Assistant Secretary of Defense for Logistics and Materiel Readiness memorandum directs the Services to use on hand and due-in Government inventory on all performance-based logistics arrangements and partnering agreements.

Department of the Army Comments

Although not required to comment, the Commander, AMCOM, stated that the DoD EMALL is just one tool available for use in conducting price analysis on material, but it does not provide full fidelity for total pricing comparisons. The Commander stated that the AMCOM Integrated Materiel Management Center is working on a strategy with CCAD, DLA, and Boeing for using DLA inventory when available and cost-effective.

Our Response

We commend AMCOM for working on a strategy to use DLA inventory when available and cost-effective. We believe that the strategy should include a step to use the DoD EMALL for evaluating prices for consumable items on contractor logistics support and performance-based logistics contracts to determine whether those parts could be supplied by DLA at lower prices.

D.2. We recommend that the Commander, Army Aviation and Missile Life Cycle Management Command, instruct the contracting officer to:

a. Include a contract clause that addresses an appropriate markup on items that Boeing obtains from the Defense Logistics Agency and negotiate an appropriate refund for the $1.1 million profit that Boeing made on purchases from the Defense Logistics Agency.

Department of the Army Comments

The Commander, AMCOM, disagreed. The Commander stated that Boeing purchased more than $3.1 million of material (29,653 items) from DLA to support CCAD requirements and sold just under $3.1 million of material (21,943 items) to CCAD. The Commander also stated that Boeing sold some items at a gain and some items at a loss, but in aggregate, Boeing made a 14 percent profit on the items. He stated that as of the end of 2009, Boeing still had $861,000 of material (7,710 items) on the shelf that it had purchased from DLA, and because DLA is not an authorized source of supply for Boeing, Boeing will not sell these parts to customers other than CCAD, therefore Boeing is assuming risk for these parts that may not be recovered.

The Commander also stated that based on current DLA policy, Boeing has not been able to establish a long-term agreement with DLA to use them as a firm source of supply for specific depot items on a recurring basis, which inhibits Boeing's ability to ensure parts availability and creates risk for Boeing in meeting its contractual responsibility to meet depot parts demands. He further stated that as a result, Boeing must ensure its supply chain stands ready to provide parts if DLA is unable to supply the parts. The Commander stated that AMCOM considers this, along with the cost of holding the excess inventory purchased from DLA, as "consideration" for some price increase applied to DLA purchased items. He also stated that one goal of the partnership contract is to provide flexibility to ensure that parts are available when required, which may not always reflect the lowest unit price for the individual material; however, the total value of the costs versus benefits of the total contract is validated. The Commander stated that AMCOM will continue to review this issue to ensure that Boeing's overall prices are not excessive when using DLA as a source of supply under the contract.

Our Response

The Commander, AMCOM, comments are partially responsive. The memorandum of agreement between the AMCOM Integrated Materiel Management Center, CCAD, DLA, and Boeing that will require DLA to fence, or set aside, available inventory for use on the partnership contract should address the risk Boeing assumes when using DLA as a source of supply. Although the Commander stated that AMCOM will continue to review Boeing purchases from DLA to ensure that overall prices are not excessive, AMCOM still needs to address, through contract language, an appropriate markup on items that Boeing obtains from DLA. We request that the Commander reconsider his position and provide additional comments in response to the final report.

b. Require Boeing to obtain consumable items from the Defense Logistics Agency as the first source of supply when cost-effective and practical.

Department of the Army Comments

The Commander, AMCOM, agreed. The Commander stated that the follow-on contract requires Boeing to use DLA as the preferred supplier for DLA-managed items that are determined to be the best value to the Government in terms of price, delivery, and quality. However, he stated that DLA policy does not currently support "fencing" parts; therefore, Boeing could potentially be at risk in its contractual responsibility to meet depot parts demand.

Our Response

The Commander, AMCOM, comments are responsive. As previously stated, memoranda issued by the Office of the Secretary of Defense and the Department of the Army require that existing inventories (Army and DLA) be addressed before purchasing from commercial supply sources. Additionally, in response to Recommendation A.3.a, the Commander stated that a memorandum of agreement is being established between the AMCOM Integrated Materiel Management Center, CCAD, DLA, and Boeing that will require DLA to fence, or set aside, available inventory for use on the partnership contract. This agreement should alleviate AMCOM and Boeing concerns regarding parts availability. No further comments are required.

Appendix A. Scope and Methodology

We conducted this performance audit from November 2009 through January 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Interviews and Documentation

We met with the Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness); the Director, Defense Procurement and Acquisition Policy; the Deputy Assistant Secretary of the Army for Acquisition Policy and Logistics; the Executive Deputy to the Commander, AMC; the Director, Support Operations, AMC; and the Commander, AMCOM. We interviewed and obtained information regarding the August 1, 2008, consumable item transfer and planned 2005 BRAC transfers from officials of the DLA Headquarters, Fort Belvoir, Virginia; Defense Supply Center Richmond, Virginia; Defense Supply Center Columbus, Ohio; and Defense Logistics Information Service Battle Creek, Michigan.

We interviewed and obtained cost support documentation from personnel of the DCAA Southern New Jersey Branch Office; DCAA Arizona Branch Office; DCMA-Boeing Philadelphia, Pennsylvania; and DCMA-Boeing Mesa, Arizona. We interviewed and obtained demand and inventory information for the Apache and Chinook weapon systems from officials of the AMCOM Integrated Materiel Management Center, Redstone Arsenal, Alabama; CCAD, Texas; the Defense Distribution Depot Corpus Christi, Texas; and the Defense Distribution Depot Red River, Texas. We interviewed and obtained RTAT information from officials of CCAD, Texas and AMCOM, Redstone Arsenal, Alabama. We interviewed and obtained acquisition planning documentation from personnel of the AMCOM Contracting Center, Redstone Arsenal, Alabama. In addition, we interviewed and obtained documentation from Boeing personnel in Mesa, Arizona, and Philadelphia, Pennsylvania.

We reviewed the United States Code, FAR, and Defense Federal Acquisition Regulation Supplement for guidance on acquisition planning, contract pricing, and inventory. We used the Electronic Document Access system to obtain and review the initial CCAD/Boeing contract, W58RGZ-04-C-0203, and modifications issued from June 2004 through September 2010, and the follow-on CCAD/Boeing unpriced contract action, W58RGZ-10-D-0027, and associated delivery orders and modifications issued from February 2010 through October 2010. We took pictures of spare parts and inventory at the Defense Distribution Depot Corpus Christi, Texas; Defense Distribution Depot Red River, Texas; and CCAD, Texas. Officials from the Defense Distribution Depot Corpus Christi, Texas; Defense Distribution Depot Red River, Texas; and DLA Distribution Susquehanna, Pennsylvania, provided us with additional pictures of spare parts and inventory.

Nonstatistical Sample Selection

We selected the audit sample from the 2008 and 2009 material attachments for the Apache and Chinook weapon systems on the initial CCAD/Boeing contract, W58RGZ-04-C-0203. The material attachments for both years totaled $288.9 million. We identified material with a 2008 to 2009 extended value of $100,000, which equated to 437 parts, valued at $245.8 million; 85 percent of the universe value. The follow-on CCAD/Boeing contract, W58RGZ-10-D-0027, included 399 of the initial 437 sample parts on the material attachments. The 2010 contract value of these parts was $92.7 million; 85 percent of the total dollar value of material Boeing was required to furnish in the 2010 contract year. We used the Haystack Gold System (Haystacks) to determine whether the parts were managed by the Army or DLA. Of the sample of 399 parts on the follow-on contract, we identified 98 Army-managed parts, valued at $24.1 million; 120 DLA-managed CITs that were transferred by the Army in August 2008 as part of a 2005 BRAC consumable item transfer, valued at $41.7 million; and 168 DLA-managed parts, valued at $24.6 million. We were unable to identify procurement history for the remaining 13 parts, valued at $2.3 million. See the table in the Background section of this report for a detailed breakout of the sample parts.

Inventory Analysis

We reviewed the initial and follow-on CCAD/Boeing contracts to identify contract requirements for using Government-furnished material and existing DLA inventory before buying new material. We reviewed the follow-on contract material attachments for the Apache and Chinook weapon systems to identify planned workload requirements and proposed contract pricing. To determine the potential costs avoided by using existing DoD inventory prior to procuring new parts from Boeing, we applied the unit prices in the follow-on contract. If the unit price was zero because the Army planned to offer Boeing Government-furnished material, we applied the previous year's contract price. For example, if the FY 2010 workload requirement for a part was 10, but the Army was offering that amount to Boeing as Government-furnished material, the FY 2010 contract unit price would be $0.00. Therefore, we applied the 2009 contract unit price to calculate the amount that could be saved by using existing inventory instead of procuring the part from Boeing.

To determine the quantity of existing CITs and DLA-managed parts in inventory that could be used to meet CCAD requirements, we reviewed inventory and demand level data obtained in April 2010 from the DLA Office of Resource and Research Analysis. For example, if DLA had 200 of a part in inventory, and a 2009 annual demand of 10, we subtracted 30 (for the 3-year contingency stock retention calculation) or 50 (for the 5-year contingency stock retention calculation) and applied the remaining quantity to meet annual contract requirements. We also used DoD EMALL to identify stock on hand and consumption data for 3,484 of the 3,989 NSNs on the follow-on CCAD/Boeing contract. We obtained data from the Apache and Chinook item managers in April 2010 to identify the demand outside of the CCAD/Boeing contract and inventory levels for the Army-managed parts, and applied a similar methodology as the CITs and DLA-managed parts to calculate the amount of inventory that could be used to meet CCAD/Boeing contract requirements.

Cost and Price Analysis

We obtained prior procurement history from Haystacks and April 2010 prices from the DLA Office of Resource and Research Analysis for the DLA-managed parts and used the Electronic Document Access system to identify prior acquisition prices for the Army-managed parts and CITs. For parts that had delivery dates prior to October 2009, we used the Bureau of Labor Statistics producer price index for aircraft parts, PPI 3728, to inflate the previous acquisition prices to October 2009. We compared contract unit prices on the initial and follow-on CCAD/Boeing contracts to previous acquisitions to identify parts with significant pricing differences between previous acquisitions and CCAD/Boeing contract prices. We judgmentally selected a non-statistical sample of 43 parts. We ensured that our sample represented Army-managed parts, CITs, and DLA consumables. Specifically, the sample consisted of 14 Apache parts and 29 Chinook parts.

We requested that Boeing provide us with supporting documentation for the contract prices. Boeing provided supporting documentation, such as memoranda of agreement, memoranda of understanding, quotes, and/or POs. We also requested data on the analysis of the proposed bills of material conducted by the DCAA Southern New Jersey Branch Office and DCMA-Boeing Philadelphia, and the DCAA Arizona Branch Office and DCMA-Boeing Mesa. We reviewed data provided by DCAA and DCMA, to include spreadsheets of quote prices, audit reports on the proposed bills of material, contractor purchasing system reviews, and PO history details. We compared the supporting documentation Boeing provided, the DCAA and DCMA analysis of quoted prices and audit reports, prior procurement history, and the AMCOM price negotiation memorandums to determine if contract prices for the sample parts that we reviewed were fair and reasonable. After analyzing the preliminary supporting documentation, our sample consisted of 24 parts because we determined 19 parts were in line with negotiated contract amounts. Upon further analysis, we determined that of the 24 parts, 18 had issues while 6 were in line with negotiated contract amounts.

RTAT Analysis

We reviewed the initial CCAD/Boeing contract to identify RTAT contract requirements. We obtained supporting data for the Phase II and Phase III baseline RTAT calculations from Boeing. We obtained supporting data for the Phase II and Phase III RTAT actual contractor performance calculations, material costs, and incentive payments from AMCOM. Because of the implementation of LMP in May 2009, AMCOM officials provided actual performance data only through April 30, 2009. We compared the data to identify discrepancies in the methodology of calculating performance; specifically, the baseline RTAT calculation included shiftwork and the actual performance RTAT calculation did not include shiftwork. We revised the Phase II RTAT baseline, removing shiftwork from the calculation to be consistent with actual performance calculations. Towards the end of the audit, AMCOM officials provided revised baseline data that did not include shiftwork. We compared actual contractor performance to the DoD IG and AMCOM revised baselines and applied the contract requirements to determine the appropriate amount of incentive payments or refunds. We compared the actual incentives paid by AMCOM with the recalculated payments to determine if Boeing owed the Army a refund for overpayment due to overstated RTAT performance or for not meeting contract requirements.

Consumable Item Acquisition Analysis

We reviewed the 2010 CCAD/Boeing follow-on contract prices and compared them to September 2010 DoD EMALL prices to determine whether the DLA or the follow-on contract prices were more cost effective. Specifically, we compared prices for 2,823 of the 3,989 parts on the CCAD/Boeing follow-on contract. The unit of issue was not comparable or data was not available within the follow-on contract or DoD EMALL system for 1,166 parts. We compared the 2009 Boeing contract quantities and unit prices to the historical procurement quantities and unit prices to determine if purchasing parts in greater quantities resulted in lower unit prices. We reviewed Boeing purchases from DLA to compare the prices Boeing paid DLA with the prices Boeing charged the Army.

Use of Computer-Processed Data

We relied on computer-processed data from DoD, DLA, and commercial sources. We used data from the Electronic Document Access system to identify previous procurement quantities and prices of the sample items. We also obtained the procurement history for the sample items from Haystack, a commercial system. We obtained data from the DLA Office of Resource and Research Analysis to include inventory, demand, and pricing data. In addition, we used DoD EMALL to obtain stock on hand, consumption data, and DLA standard unit prices of 3,484 of the 3,989 NSNs on the follow-on contract. To track Boeing's material part purchase history, we obtained purchase orders prior to May 2, 2005, from the Material Procurement System and purchase orders after May 2, 2005, from the Network Procurement System. We also obtained inventory and RTAT data from the Standard Depot System, the Army's former inventory and depot maintenance operations system.

We have compared procurement history information obtained from the Haystack system to contract documents information obtained from the EDA system and determined this data to be reliable. In addition, we used Haystack for the past several audits and have not found any material errors or discrepancies. We also validated inventory levels for a sample of 20 parts at the Defense Distribution Depot Corpus Christi, Texas, and 20 parts at the Defense Distribution Depot Red River, Texas. During our review, we did not find any material errors or significant differences in the data. We used consumption or sales quantities provided by Boeing to calculate the amount of excessive prices. DCAA reported no significant deficiencies or internal control weaknesses related to firm-fixed-price contracts with Boeing's billing or accounting system; therefore, we consider the data reliable. We did not find errors that would preclude the use of the computer-processed data to meet the audit objectives or that would change the conclusions reached in this report.

Prior Coverage

During the last 5 years, the Government Accountability Office (GAO), the DoD IG, and the Army Audit Agency (AAA) have issued several reports related to the management of spare part inventories and DoD public-private partnership agreements with private firms for depot maintenance. Unrestricted GAO reports can be accessed over the Internet at http://www.gao.gov. Unrestricted DoD IG reports can be accessed at http://www.dodig.mil/audit/reports. Unrestricted Army reports can be accessed from .mil and gao.gov domains over the Internet at https://www.aaa.army.mil/.

GAO

GAO Report No. GAO-10-469, "Defense Logistics Agency Needs to Expand on Efforts to More Effectively Manage Spare Parts," May 11, 2010

GAO Report No. GAO-10-461, "Actions Needed to Improve Implementation of the Army Logistics Modernization Program," April 30, 2010

GAO Report No. GAO-09-703, "DoD Needs to Update Savings Estimates and Continue to Address Challenges in Consolidating Supply-Related Functions at Depot Maintenance Locations," July 9, 2009

GAO Report No. GAO-08-902R, "Depot Maintenance: DoD's Report to Congress on Its Public-Private Partnerships at Its Centers of Industrial and Technical Excellence (CITEs) Is Not Complete and Additional Information Would Be Useful," July 1, 2008

DoD IG

DoD IG Report No. D-2010-067, "Public-Private Partnerships at Air Force Maintenance Depots," June 10, 2010

DoD IG Report No. D-2010-063, "Analysis of Air Force Secondary Power Logistics Solution Contract," May 21, 2010

Army

AAA Report No. A-2008-0058-ALM, "Benefits of Public-Private Partnerships," February 7, 2008

Appendix B. Additional Examples of Excess Inventory

The following are some additional examples of parts that had a significant amount of DoD inventory that could be used to satisfy current and future CCAD requirements, as discussed in Finding A.

Sample 14 – Direct Selector Set (NSN 1650-01-117-4160)

AMCOM officials spent $1,271,641 to procure a quantity of 362 direct selector sets from Boeing in 2009 through the CCAD/Boeing contract; the unit price per part was $3,512.82. The planned requirement on the follow-on contract is for 1,353 more during the 5-year performance period, at a total value of $4,410,146, or an average unit price of $3,259.53. As of November 2009, the Defense Distribution Depot Corpus Christi, Texas, had 318 in inventory. Based on June 2010 Federal Logistics Information System data, the value of this inventory was about $826,800 or $2,600.00 each. According to AMCOM data, the annual demand requirement outside of the CCAD/Boeing contract for this part is zero. Figure B-1 shows the direct selector set, which is used on the Chinook helicopter, in storage at the Defense Distribution Depot Corpus Christi, Texas.

Figure B-1. Sample 14 – Direct Selector Set

Sample 18 – Linear Actuating Cylinder Piston (1650-01-310-5860)

AMCOM officials spent $1,276,588 to procure a quantity of 194 linear actuating cylinder pistons from Boeing in 2009 through the CCAD/Boeing contract; the unit price per part was $6,580.35. The planned requirement on the follow-on contract is for 702 more during the 5-year performance period, at a total value of $3,819,522, or an average unit price of $5,440.91. As of November 2009, the Defense Distribution Depot Corpus Christi, Texas, had 236 in inventory. Based on June 2010 Federal Logistics Information System data, the value of this inventory was about $1,242,540, or $5,265.00 each. According to AMCOM data, the annual demand requirement outside of the CCAD/Boeing contract for this part is zero.

Figure B-2 shows the linear actuating cylinder piston, which is used on the Chinook helicopter, in storage at the Defense Distribution Depot Corpus Christi, Texas.

Figure B-2. Sample 18 – Linear Actuating Cylinder Piston

Sample 119 – Inner Bearing Ring (NSN 3110-01-163-4609)

AMCOM officials spent $326,443 to procure a quantity of 660 inner bearing rings from Boeing in 2009 through the CCAD/Boeing contract; the unit price per part was $494.61. AMCOM officials plan to procure 3,300 more of this part during the 5-year performance period of the follow-on CCAD/Boeing contract at a total value of $2,669,245, or an average unit price of $808.86. As of April 2010, DLA had 1,851 in inventory valued at $563,741, or a unit price of $304.56, based on June 2010 Federal Logistics Information System data. According to DLA data, only 15 of the parts were requisitioned from DLA in 2009; therefore, DoD has more than 100 years of inventory of this part. Figure B-3 shows the inner bearing ring, which is used on the Apache helicopter.

Figure B-3. Sample 119 – Inner Bearing Ring

Source: Defense Distribution Depot Corpus Christi, Texas

Appendix C. Sample Parts With Pricing Issues

The following are some additional examples of the pricing issues (defective data and Boeing negotiated better prices) that we identified during our review of the 24 high-dollar sample parts discussed in Finding B. See Appendix E for detailed calculations of the cost impact.

Additional Examples of Defective Data

As shown in the following examples, Boeing had information that was reasonably available before the material certification cutoff dates that was not used to support CCAD/Boeing contract prices.

Sample 356 – Rod End Plain Bearing (NSN 3120-00-834-1507) (Quote Issue – Better Data Available Before Material Certification Cutoff Date)

Officials from AMCOM and Boeing negotiated a total contract price of $210,221 for 632 rod end plain bearings for 2005 through 2009, and the Army procured 447 rod end plain bearings at a total price of $140,724; a weighted average unit price of $314.82. Boeing used historical data from its MES showing a weighted average unit price of $102.84, based on quantities ranging from 2 to 96, to support the 2006 CCAD/Boeing negotiated unit price of $133.10. However, Boeing then decided to update the 2007 through 2009 contract prices and used a vendor quote with prices ranging from $288.93 to $297.73 to support CCAD/Boeing negotiated prices of $387.28 in 2007, $369.92 in 2008, and $367.98 in 2009. The material certification cutoff date for the 2007 through 2009 prices was June 1, 2006. Using a weighted average of the five Boeing POs issued before the material certification cutoff date that Boeing should have used to support its proposed price, we calculated that the correct proposed unit cost should have been $106.55, resulting in a burdened Boeing price to CCAD of $142.78 or less than half the price Boeing negotiated with AMCOM. Boeing needs to provide AMCOM a refund of $76,902 for this part.

Table C-1 shows the pricing information for the rod end plain bearing, which is used on the Chinook helicopter.

Table C-1. Sample 356 – Pricing Information for the Rod End Plain Bearing

	Date	Quantity	Unit Cost/Price	Percent Difference
AMCOM Procurement (RBC Transport Dynamics Corporation)	5/29/2007	766	$ 84.60	
Boeing MES Average Price	2003-2005	2-96	102.84	
New Hampshire Ball Bearings Price Quote	6/24/2005	25-99	288.93 to 297.73	
Boeing PO AMK356P	4/30/2005	88	101.66	
Boeing PO ALF012P	4/30/2005	24	246.54	
Boeing PO 2004037	6/24/2005	2,121	98.19	
Boeing PO 2013227	10/25/2005	504	130.54	
Boeing PO 2022161	04/11/2006	113	130.54	
Burdened Boeing PO Price (Weighted Average)			**142.78**	
Phase III Material Certification Cutoff Date 6/1/2006				
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2005 (8/8/2005)	15/0	130.94	
	2006 (8/8/2005)	90/113	**133.10**	(6.8)
	2007 (6/15/2007)	132/135	**387.28**	171.2
	2008 (6/15/2007)	188/89	**369.92**	159.1
	2009 (6/15/2007)	207/110	**367.98**	157.7
DCAA Review of MES Averages (2005-2009)			196.10	
Proposed Follow-On Contract (2010-2014)	2/1/2010	690 (138/year)	147.42 to 161.31	

Sample 376 – Linear Actuating Cylinder Piston (NSN 1650-00-955-9588) (Quantity and Quote Issue—Better Data Available Before Material Certification Cutoff Date)

Officials from AMCOM and Boeing negotiated a total price of $146,734 for 60 linear actuating cylinder pistons from 2007 through 2009, and the Army purchased 42 linear actuating cylinder pistons for a total price of $104,104; a weighted average unit price of $2,478.66. Boeing provided a range pricing quote from Olympic Tool and Machine Corporation as supporting documentation for the contract price. Boeing used the quoted prices to support the negotiated contract price; however, on March 30, 2006, about 2 months before the material certification cutoff date, Boeing awarded PO 2021478 to Olympic Tool and

Machine Corporation for 17 parts at a unit price of $1,280.00. This PO should have been used to support the negotiated price. On June 6, 2007, about a year after the material certification cutoff date but before the parts were actually placed on the CCAD/Boeing contract, Boeing switched vendors and procured 148 linear actuating cylinder pistons at a unit price of only $785.00. Using the higher PO data that were available before the material certification cutoff date, we calculated that the correct price for the 42 linear actuating cylinder pistons procured should have been $74,227, or a difference of 40.3 percent. Boeing needs to provide AMCOM a refund of $29,877 for this part. Table C-2 shows the pricing information, and Figure C-1 shows the linear actuating cylinder piston, which is used on the Chinook helicopter.

Table C-2. Sample 376 – Pricing Information for the Linear Actuating Cylinder Piston

	Date	Quantity	Unit Cost/Price	Percent Difference
DLA Procurement (Royberg, Inc.)	1/7/2002	277	$ 90.00	
Boeing Quote for 2007 price	6/23/2005	4-6	1,901.00	
Boeing Quote for 2008 price	6/23/2005	7-11	1,849.00	
Boeing Quote for 2009 price	6/23/2005	7-11	1,997.00	
Boeing PO 2021478	3/30/2006	17	1,280.00	
Burdened Boeing PO Price (Weighted Average)			**1,767.31**	
Phase III Material Certification Cutoff Date 6/1/2006				
Boeing PO 2046485 (Awarded After Material Certification Cutoff)	6/6/2007	148	785.00	
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2007 (6/15/2007)	6/8	**2,445.70**	38.4
	2008 (6/15/2007)	30/11	**2,367.30**	33.9
	2009 (6/15/2007)	24/23	**2,543.38**	43.9
Proposed Follow-On Contract (2010-2014)	2/1/2010	105 (21/year)	1,256.25 to 1,327.31	

Figure C-1. Sample 376 – Linear Actuating Cylinder Piston

Source: DLA Distribution Susquehanna, Pennsylvania

Additional Examples of Boeing Negotiating Better Prices

As shown in the following examples, Boeing obtained quantity discounts and negotiated lower prices that were not passed on to the Army.

Sample 20 – Alternating Current Motor (NSN 6105-00-251-2494) (Quantity and Quote Issue)

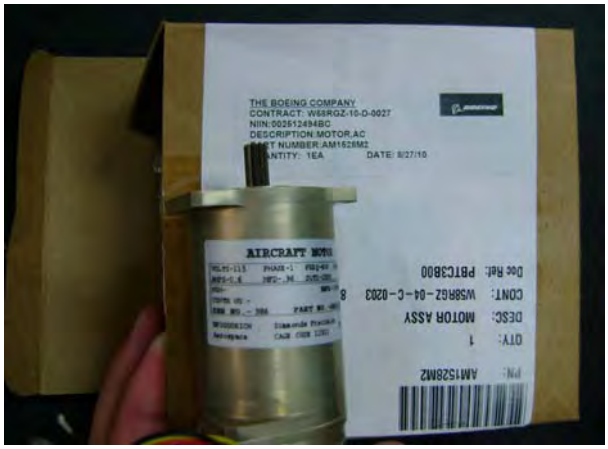
Officials from AMCOM and Boeing negotiated a total price of $2.1 million for 386 alternating current motors in 2008 and 2009, and procured 211 alternating current motors at a total price of $1.1 million; the weighted average unit price was $5,421.56. To support the negotiated prices Boeing used a March 8, 2006, quote from Goodrich for quantities of 26 to 50 at unit prices of $4,299.00 for 2008 and $4,507.00 for 2009. On January 23, 2008, Boeing combined buys and procured 1,064 alternating current motors from Goodrich at a substantial savings to Boeing, but not the Army. We calculated that the Army paid Boeing $1.1 million for the 211 alternating current motors that should have cost the Army only $372,369 or a difference of $771,580 (207.2 percent). Table C-3 shows the pricing information for the alternating current motor.

Table C-3. Sample 20 – Pricing Information for the Alternating Current Motor

	Date	Quantity	Unit Price	Percent Difference
Boeing Quote from Goodrich (2009 Range Price)	3/8/2006	26-50	$4,507.00	
Phase III Material Certification Cutoff Date 6/1/2006				
Boeing PO With Goodrich (PO 2059390)	1/23/2008	1,064	1,317.00	
Burdened Boeing PO Price			**1,764.78**	
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2008 (6/15/2007)	203/96	**5,261.62**	198.1
	2009 (6/15/2007)	183/115	**5,555.07**	214.8
DCAA Review of Vendor Quotes (2008-2009 Average Unit Price)	10/13/2004		1,108.00	
Proposed Follow-On Contract (2010-2014)	2/1/2010	Range 62-142/year	1,868.96 to 1,929.14	

Figure C-2 shows the alternating current motor, which is used on the Chinook helicopter.

Figure C-2. Sample 20 – Alternating Current Motor



Sample 167 – Aircraft Centrifugal Clutch Assembly (NSN 1615-01-219-8666) (Quantity Issue)

AMCOM officials procured 60 aircraft centrifugal clutch assemblies from Boeing in 2008 and 2009 at a weighted average unit price of $5,111.30, for a total price of $306,678. The negotiated prices were based on a May 5, 2006, price quote with range pricing for 4 to 6 parts at a unit price of $4,897.00 and range pricing for 7 to 11 parts at a unit price of $3,629.00. Boeing had historical PO data from April 23, 1990, showing a unit price of $1,545.62 for both a quantity of 6 parts (PO AAC581) and a quantity of 25 parts (PO AAC578) that were not used. On June 6, 2007, less than 2 months after the material certification cutoff date of April 24, 2007, Boeing awarded a PO to its supplier at a unit price of $2,701.21 for 23 parts (PO 2038013). We calculated that the Army paid $306,678 for the 60 aircraft centrifugal clutch assemblies procured when it should have only paid $230,131, a difference of $76,546, or 33.3 percent.

Sample 324 – Sleeve Bushing (NSN 3120-00-881-0018) (Quantity and Material Estimating System Issue)

Officials from AMCOM and Boeing negotiated a total price of $328,129 for 839 sleeve bushings from 2005 through 2009, and the Army procured 658 sleeve bushings at a total price of $258,676; a weighted average unit price of $393.13. Boeing based the contract prices on historical data from its MES for 5 procurements of one each with prices ranging from $96.00 to $500.00. The DCAA Southern New Jersey Branch reviewed the prices from the Boeing MES. The material certification cutoff date for this part was June 30, 2005. Less than a month later, on July 14, 2005, Boeing purchased 177 sleeve bushings at a unit price of $46.00, and then on September 8, 2005, Boeing purchased 1,166 sleeve bushings at a unit price of $24.72. We calculated that the Army paid Boeing $258,676 for the 658 sleeve bushings procured when they should have paid only $25,614; a difference of $233,062, or 909.9 percent.

Table C-4 shows the pricing information, and Figure C-3 shows the sleeve bushing, which is used on the Chinook helicopter.

Table C-4. Sample 324 – Pricing Information for the Sleeve Bushing

	Date	Quantity	Unit Price	Percent Difference
Historical Boeing MES Data	2/13/1995 to 2/16/2005	1	$96.00 to 500.00	
DCAA Review of MES Averages	10/13/2004		194.26	
Phase IIA Material Certification Cutoff Date 6/30/2005				
Boeing PO 2005209	7/14/2005	177	46.00	
Boeing PO 2009851	9/8/2005	1,166	24.72	
Burdened Boeing PO Price (Weighted Average)			**38.93**	
CCAD/Boeing Contract (Modification Date) Negotiated/Procured Quantities	2005 (8/8/2005)	150/0	**367.91**	845.1
	2006 (8/8/2005)	140/150	**373.99**	860.7
	2007 (6/15/2007)	140/100	**379.76**	875.5
	2008 (6/15/2007)	205/204	**399.69**	926.7
	2009 (6/15/2007)	204/204	**407.18**	945.9
Proposed Follow-On Contract (2010-2014)	2/1/2010	Range 134-174/year	39.45 to 40.83	

Figure C-3. Sample 324 – Sleeve Bushing

Appendix D. Potential Nonconforming Parts

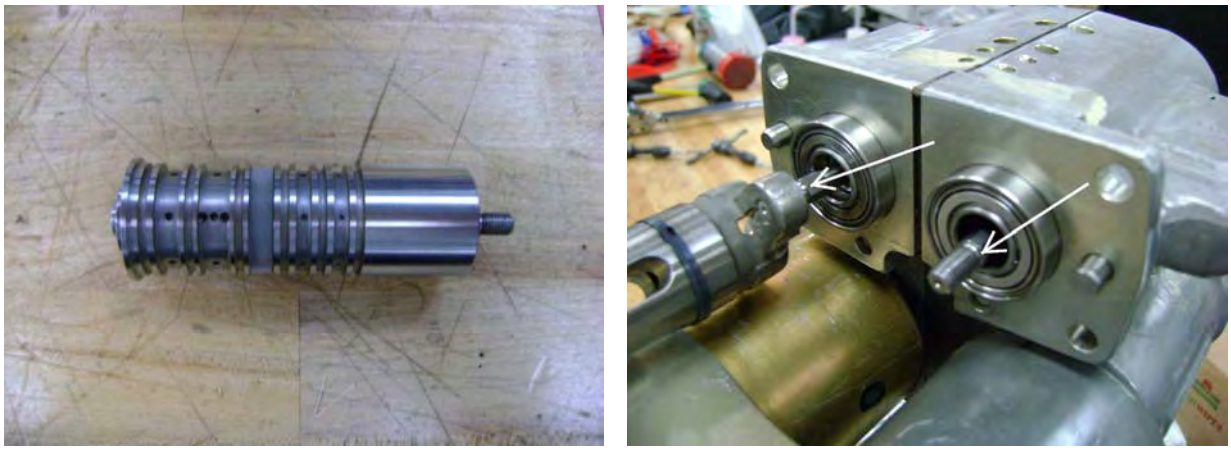
The following is detailed information regarding the nonconforming parts discussed in Finding B.

Sample 14 – Direct Selector Set (NSN 1650-01-117-4160)

The planned requirement on the follow-on CCAD/Boeing contract is for 1,353 direct selector sets, valued at $4.4 million, from 2010 to 2014. The direct selector connects to a swash plate, which controls the pivot and swivel of the propeller blades. CCAD workers stated that the threading on the direct selector set often is not correct and to remove the part, it must be broken out. When breaking out this part, up to three other parts are broken, leaving CCAD workers with additional parts to replace.

Figure D-1 shows the direct selector set, which is used on the Chinook helicopter. The arrows in the second picture indicate the defective area.

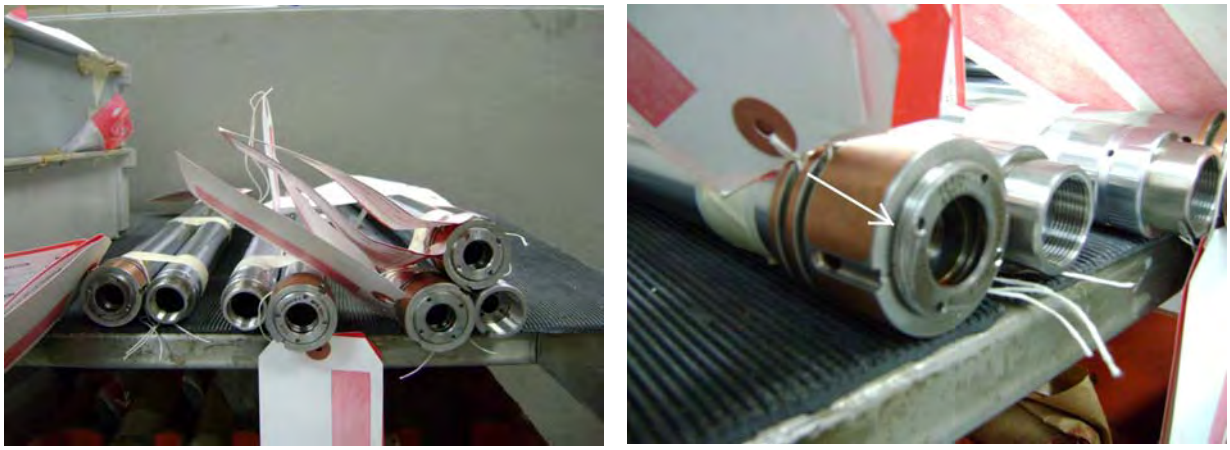
Figure D-1. Sample 14 – Direct Selector Set



Samples 18 and 25 – Linear Actuating Cylinder Pistons (NSNs 1650-01-310-5860 and 1650-01-311-2580)

CCAD workers stated that the linear actuating cylinder pistons are used as a swivel and pivot and also connect to the swash plate, which controls the propeller blades. They found that the linear actuating cylinder pistons are nonconforming because the lock ring does not insert flush into the cylinder piston and therefore cannot be used. CCAD workers identified problems with both parts and showed us a stack of parts that needed to be returned to Boeing, as shown in Figure D-2. The arrow in the second picture identifies the lock ring that is not inserted flush with the piston.

Figure D-2. Samples 18 and 25 – Defective Linear Actuating Cylinder Pistons



From 2010 through 2014, AMCOM officials plan to purchase 702 of sample 18, valued at $3.8 million, and 868 of sample 25, valued at $4.1 million. We mentioned the parts to Boeing representatives who originally stated there had been no reported issues for the parts but later indicated that there may have been some reported problems.

Expired Bearings

CCAD workers stated that bearings go through a lubrication process to prepare them for use and when packaged, the manufacturer marks each part with an expiration date. The typical shelf life of a bearing is 3 years, and after 3 years the bearing needs to be relubed. According to CCAD workers, many of the bearings that Boeing provides are expired when CCAD receives them. The CCAD workers provided NSN 3110-01-271-5982 as an example of the expired bearings. Figure D-3 shows a picture of the label on a box from a Boeing supplier with a lube date of November 2006, meaning that the bearing expires 3 years later in November 2009; and a picture of the same box with Boeing's label on it, which has a package date of July 29, 2010, almost 1 year after the bearing expired.

Figure D-3. Bearing With an Expired Manufacturer Label and Current Boeing Label

According to CCAD workers, to use the expired bearings provided by Boeing, they must rework the parts to ensure compliance with the proper standards before being installed. This part has a 2010 contract price of $19.41; however, the cost to rework a bearing is generally $150.00 per bearing. CCAD workers use large quantities of bearings—up to 1,000 per month—therefore, the expired bearings provided by Boeing created even more work and increased the overall cost for the Army.

Appendix E. Calculation of Cost Impact on Sample Parts*

Sample Number/NSN/ Part Number	Year	Boeing Cost/ Price			CCAD/Boeing Contract Price			DoD IG Calculated Total Price[1]	Total Difference	
		Qty	Unit Cost	Burdened Unit Price	Qty	Unit Price	Total Price		Amount	Percent
Pricing Errors/Better Data Available Before Certification/Pass-Through Part										
5	2005	WA[2]	$6,352.99	$8,513.01	0	$58,949.85				
1680002451833	2006		6,352.99	8,513.01	0	20,692.89				
	2007		6,352.99	8,513.01	6	22,101.31	$132,608	$ 51,078	$ 81,530	159.6
114VS800-3	2008		6,352.99	8,513.01	16	22,595.53	361,528	136,208	225,320	165.4
	2009		6,352.99	8,513.01	3	23,093.82	69,281	25,539	43,742	171.3
Subtotal					**25**	**$22,536.71**	**$563,418**	**$212,825**	**$350,593**	**164.7**
Boeing Credit Issued[3]									**$376,635**	
91	2006	WA[2]	$52.32	$70.11	0					
	2007		52.32	70.11	267	$595.91	$159,108	$18,718	$140,390	750.0
3020005662521	2008		52.32	70.11	267	615.60	164,365	18,718	145,647	778.1
BRYG-180	2009		52.32	70.11	457	644.75	294,651	32,039	262,612	819.7
Subtotal					**991**	**$623.74**	**$618,124**	**$69,475**	**$548,649**	**789.7**
Boeing Credit Issued[3]									**$556,006**	

* Subtotals and totals in Appendix E do not always add exactly due to spreadsheet rounding factors.

Sample Number/NSN/ Part Number	Year	Boeing Cost/ Price			CCAD/Boeing Contract Price			DoD IG Calculated Total Price[1]	Total Difference	
		Qty	Unit Cost	Burdened Unit Price	Qty	Unit Price	Total Price		Amount	Percent
110 (Apache) 5307011634676 7-311411045-3	2009	113	$1,036.00	$1,388.24	168	$3,369.48	$566,073	$233,224	$332,848	142.7
Subtotal					**168**	**$3,369.48**	**$566,073**	**$233,224**	**$332,848**	**142.7**
Boeing Credit Issued									**$324,616**	
356 3120008341507 114CS118-2	2005	WA	$106.55	$142.78	0	$130.94				
	2006		106.55	142.78	113	133.10	$ 15,040	$16,134	($ 1,094)	(6.8)
	2007		106.55	142.78	135	387.28	52,283	19,275	33,008	171.2
	2008		106.55	142.78	89	369.92	32,923	12,707	20,216	159.1
	2009		106.55	142.78	110	367.98	40,478	15,705	24,772	157.7
Subtotal					**447**	**$314.82**	**$140,724**	**$63,821**	**$76,902**	**120.5**
Boeing Credit Issued										
371 3120008666099 114R3116-30	2005	WA	$23.13	$30.99	0					
	2006		23.13	30.99	154	$271.02	$ 41,737	$ 4,772	$ 36,965	774.6
	2007		23.13	30.99	168	337.64	56,724	5,206	51,518	989.6
	2008		23.13	30.99	20	355.35	7,107	620	6,487	1,046.8
	2009		23.13	30.99	188	362.01	68,058	5,826	62,232	1,068.2
Subtotal					**530**	**$327.60**	**$173,626**	**$16,423**	**$157,202**	**957.2**
Boeing Credit Issued[3]									**$159,164**	

Sample Number/NSN/ Part Number	Year	Boeing Cost/ Price			CCAD/Boeing Contract Price			DoD IG Calculated Total Price[1]	Total Difference	
		Qty	Unit Cost	Burdened Unit Price	Qty	Unit Price	Total Price		Amount	Percent
376	2006	17	$1,280.00	$1,715.20	0					
	2007	WA[2]	1,318.89	1,767.31	8	$2,445.70	$ 19,566	$14,138	$ 5,427	38.4
1650009559588	2008		1,318.89	1,767.31	11	2,367.30	26,040	19,440	6,600	33.9
114H4704-2	2009		1,318.89	1,767.31	23	2,543.38	58,498	40,648	17,850	43.9
Subtotal					**42**	**$2,478.66**	**$104,104**	**$74,227**	**$29,877**	**40.3**
Boeing Credit Issued										
398	2008	255	$28.00	$37.52	18	$1,533.82	$27,609	$ 675	$26,933	3,988.0
1560004094101										
114S6706-1										
	2009		28.00	37.52	32	1,678.61	53,716	1,201	52,515	4,373.9
Subtotal					**50**	**$1,626.49**	**$81,324**	**$1,876**	**$79,448**	**4,235.0**
Boeing Credit Issued[3]									**$76,849**	
Total							**$2,247,392**	**$671,873**	**$1,575,519**	**234.5**
Pass-Through Part										
45	2006	Army*	$6,066.00	$8,128.44	0					
	2007		6,066.00	8,128.44	5	$21,303.56	$106,518	$ 40,642	$ 65,876	162.1
1650008341430	2008		6,066.00	8,128.44	4	21,447.24	85,789	32,514	53,275	163.9
4067-189	2009		6,066.00	8,128.44	20	21,849.21	436,984	162,569	274,415	168.8
Subtotal	*Reflects 11/2008 Army price				**29**	**$21,699.69**	**$629,291**	**$235,725**	**$393,566**	**167.0**
Boeing Credit Issued[3]									**Pending**	
Total							**$629,291**	**$235,725**	**$393,566**	**167.0**

Sample Number/NSN/ Part Number	Year	Boeing Cost/ Price			CCAD/Boeing Contract Price			DoD IG Calculated Total Price[1]	Total Difference	
		Qty	Unit Cost	Burdened Unit Price	Qty	Unit Price	Total Price		Amount	Percent
Price Not Correct for Follow-On Contract Proposal										
45	2010	Army*	$6,066.00	$8,128.44	20	$31,164.51	$ 623,290	$162,569	$ 460,721	283.4
1650008341430	2011		6,066.00	8,128.44	16	31,604.34	505,669	130,055	375,614	288.8
	2012		6,066.00	8,128.44	16	31,726.57	507,625	130,055	377,570	290.3
4067-189	2013		6,066.00	8,128.44	16	31,992.27	511,876	130,055	381,821	293.6
	2014		6,066.00	8,128.44	16	32,253.53	516,056	130,055	386,001	296.8
Subtotal	*Reflects 11/2008 Army price				**84**	**$31,720.45**	**$2,664,518**	**$682,789**	**$1,981,729**	**290.2**
415	2010	60	$4.15	$5.56	60	$301.68	$ 18,101	$ 334	$ 17,767	5,324.9
3110011369793	2011	90	4.15	5.56	90	305.94	27,535	500	27,034	5,401.5
	2012	90	4.15	5.56	90	307.12	27,641	500	27,140	5,422.7
934390	2013	90	4.15	5.56	90	309.69	27,872	500	27,372	5,469.0
	2014	90	4.15	5.56	90	312.22	28,100	500	27,599	5,514.5
Subtotal					**420**	**$307.73**	**$129,248**	**$2,336**	**$126,912**	**5,433.8**
Total							**$2,793,766**	**$685,125**	**$2,108,641**	**307.8**
Quantity Issues										
7	2006	WA[2]	$4,695.44	$6,291.89	54	$ 9,022.30	$ 487,204	$ 339,762	$ 147,442	43.4
3110013560489	2007	WA[2]	4,695.44	6,291.89	165	9,400.60	1,551,099	1,038,163	512,936	49.4
	2008	WA[2]	4,695.44	6,291.89	186	10,737.98	1,997,264	1,170,292	826,972	70.7
114RS308-2	2009	WA[2]	4,695.44	6,291.89	237	11,363.08	2,693,050	1,491,179	1,201,871	80.6
Subtotal					**642**	**$10,480.71**	**$6,728,618**	**$4,039,396**	**$2,689,222**	**66.6**

Sample Number/NSN/ Part Number	Year	Boeing Cost/ Price			CCAD/Boeing Contract Price			DoD IG Calculated Total Price[1]	Total Difference	
		Qty	Unit Cost	Burdened Unit Price	Qty	Unit Price	Total Price		Amount	Percent
13	2005	19	$3,788.89	$5,077.12	0					
	2006	WA[2]	2,160.24	2,894.73	159	$4,457.00	$ 708,663	$ 460,261	$ 248,401	54.0
6105004634901	2007		2,160.24	2,894.73	332	4,525.78	1,502,559	961,049	541,510	56.3
39449-7	2008		2,160.24	2,894.73	272	4,993.36	1,358,194	787,365	570,829	72.5
	2009		2,160.24	2,894.73	280	5,093.88	1,426,286	810,523	615,763	76.0
Subtotal					**1,043**	**$4,789.74**	**$4,995,702**	**$3,019,198**	**$1,976,504**	**65.5**
20	2008	1,064	$1,317.00	$1,764.78	96	$5,261.62	$ 505,116	$169,419	$335,697	198.1
6105002512494	2009	240	1,317.00	1,764.78	115	5,555.07	638,833	202,950	435,883	214.8
AM1528M2										
Subtotal					**211**	**$5,421.56**	**$1,143,949**	**$372,369**	**$771,580**	**207.2**
167	2008	WA[2]	$2,862.33	$3,835.52	6	$6,624.62	$ 39,748	$ 23,013	$16,735	72.7
1615012198666	2009		2,862.33	3,835.52	54	4,943.15	266,930	207,118	59,812	28.9
114DS672-2										
Subtotal					**60**	**$5,111.30**	**$306,678**	**$230,131**	**$76,546**	**33.3**
200 (Apache)	2005	WA[2]	$44.34	$59.42	15	$ 90.56	$ 1,358	$ 891	$ 467	52.4
	2006		44.34	59.42	15	291.66	4,375	891	3,484	390.9
5340011611199			44.34	59.42	10	352.65	3,527	594	2,932	493.5
7-113100127	2007		44.34	59.42	60	371.77	22,306	3,565	18,741	525.7
	2008		44.34	59.42	232	382.90	88,833	13,784	75,048	544.4
	2009		44.34	59.42	384	398.32	152,955	22,816	130,139	570.4
Subtotal					**716**	**$381.78**	**$273,354**	**$42,542**	**$230,812**	**542.6**

Sample Number/NSN/ Part Number	Year	Boeing Cost/ Price			CCAD/Boeing Contract Price			DoD IG Calculated Total Price[1]	Total Difference	
		Qty	Unit Cost	Burdened Unit Price	Qty	Unit Price	Total Price		Amount	Percent
324	2005	WA[2]	$29.05	$38.93	0					
3120008810018	2006		29.05	38.93	150	$373.99	$ 56,099	$ 5,839	$ 50,260	860.7
	2007		29.05	38.93	100	379.76	37,976	3,893	34,083	875.6
114L2433-1	2008		29.05	38.93	204	399.69	81,537	7,941	73,596	926.7
	2009		29.05	38.93	204	407.18	83,065	7,941	75,123	946.0
Subtotal					**658**	**$393.13**	**$258,676**	**$25,614**	**$233,062**	**909.9**
338	2007	54	$1,295.00	$1,735.30						
1650009559586	2008		1,295.00	1,735.30	5	$5,427.38	$27,137	$ 8,677	$18,460	212.8
	2009		1,295.00	1,735.30	8	5,465.63	43,725	13,882	29,843	215.0
114H4715-2										
Subtotal					**13**	**$5,450.92**	**$70,862**	**$22,559**	**$48,303**	**214.1**
Total							**$13,777,838**	**$7,751,809**	**$6,026,029**	**77.7**
Boeing Make Issue										
3	2005	DLA*		$545.59						
3120001384083	2006			545.59	0					
	2007			545.59	375	$3,845.36	$1,442,010	$204,596	$1,237,414	604.8
114R2197-4	2008			545.59	351	4,223.13	1,482,319	191,502	1,290,817	674.0
	2009			545.59	0					
Subtotal	*DLA 10/2010 Standard Unit Price				**726**	**$4,028.00**	**$2,924,329**	**$396,098**	**$2,528,230**	**638.3**
Boeing Credit Issued[3]									**$164,535**	

Sample Number/NSN/ Part Number	Year	Boeing Cost/ Price			CCAD/Boeing Contract Price			DoD IG Calculated Total Price[1]	Total Difference	
		Qty	Unit Cost	Burdened Unit Price	Qty	Unit Price	Total Price		Amount	Percent
206	2005	DLA*		$103.68	2	$700.54	$ 1,401	$ 207	$ 1,194	575.7
				103.68	12	50.24	603	1,244	(641)	(51.5)
1680011056441	2006			103.68	87	674.99	58,724	9,020	49,704	551.0
145R2190-5	2007			103.68	145	645.20	93,554	15,034	78,520	522.3
	2008			103.68	0	721.38				
	2009			103.68	163	751.51	122,496	16,900	105,596	624.8
Subtotal	*DLA 10/2010 Standard Unit Price				**409**	**$676.72**	**$276,779**	**$42,405**	**$234,373**	**552.7**
Total							**$3,201,107**	**$438,503**	**$2,762,604**	**630.0**
Parts In Line with Negotiated Contract Amount										
6	2005	319	$27,899.00	$37,384.66						
	2006		27,899.00	37,384.66	0					
1615011994145	2007	178	29,598.00	39,661.32	32	$38,093.81	$1,219,002	$1,269,162	($ 50,160)	(4.0)
114R2050-35	2008	280	30,486.00	40,851.24	35	42,890.71	1,501,175	1,429,793	71,381	5.0
	2009		30,486.00	40,851.24	47	44,829.25	2,106,975	1,920,008	186,966	9.7
Subtotal					**114**	**$42,343.43**	**$4,827,152**	**$4,618,964**	**$208,188**	**4.5**
8	2005	379	$27,899.00	$37,384.66						
	2006	54	29,153.00	39,065.02	0					
1615011987553	2007	279	29,598.00	39,661.32	45	$37,033.38	$1,666,502	$1,784,759	($118,257)	(6.6)
114R2050-36	2008	227	30,486.00	40,851.24	34	41,680.28	1,417,130	1,388,942	28,187	2.0
	2009		30,486.00	40,851.24	33	43,548.24	1,437,092	1,348,091	89,001	6.6
Subtotal					**112**	**$40,363.60**	**$4,520,724**	**$4,521,792**	**($ 1,069)**	**(0.02)**

Sample Number/NSN/ Part Number	Year	Boeing Cost/ Price			CCAD/Boeing Contract Price			DoD IG Calculated Total Price[1]	Total Difference	
		Qty	Unit Cost	Burdened Unit Price	Qty	Unit Price	Total Price		Amount	Percent
67	2005	166	$6,950.00	$ 9,313.00	0					
	2006		6,950.00	9,313.00	0					
1615012053921	2007		6,950.00	9,313.00	4	$ 9,762.80	$ 39,051	$ 37,252	$ 1,799	4.8
234R2088-1			6,950.00	9,313.00	9	9,338.66	84,048	83,817	231	0.3
	2008	580	10,816.00	14,493.44	29	10,079.96	292,319	420,310	(127,991)	(30.5)
	2009	84	11,500.00	15,410.00	62	10,605.69	657,553	955,420	(297,867)	(31.2)
Subtotal					**104**	**$10,317.03**	**$1,072,971**	**$1,496,799**	**($423,828)**	**(28.3)**
83	2006	84	$2,290.00	$3,068.60	2	$2,711.99	$ 5,424	$ 6,137	($ 713)	(11.6)
	2007	121	1,894.36	2,538.44	90	2,737.40	246,366	228,460	17,906	7.8
1560011153618	2008	210	2,514.35	3,369.23	24	3,097.00	74,328	80,861	(6,533)	(8.1)
145R2053-1	2009	236	2,498.35	3,347.79	86	3,246.46	279,196	287,910	(8,714)	(3.0)
Subtotal					**202**	**$2,996.60**	**$605,314**	**$603,368**	**$ 1,945**	**0.3**
222	2005	WA[2]	$4,006.84	$5,369.17	0					
	2006		4,006.84	5,369.17	15	$4,705.73	$ 70,586	$ 80,537	($9,952)	(12.4)
1620008689795	2007		4,006.84	5,369.17	2	5,295.67	10,591	10,738	(147)	(1.4)
114L2325-2	2008		4,006.84	5,369.17	29	5,414.19	157,012	155,706	1,306	0.8
	2009		4,006.84	5,369.17	12	5,608.06	67,297	64,430	2,867	4.4
Subtotal					**58**	**$5,266.99**	**$305,486**	**$311,412**	**($5,926)**	**(1.9)**

Sample Number/NSN/ Part Number	Year	Boeing Cost/ Price			CCAD/Boeing Contract Price			DoD IG Calculated Total Price[1]	Total Difference	
		Qty	Unit Cost	Burdened Unit Price	Qty	Unit Price	Total Price		Amount	Percent
276	2007	24	$2,471.01	$3,311.15	0					
	2008		2,471.01	3,311.15	1	$3,266.33	$3,266	$3,311	($45)	(1.4)
6105011204285	2009		2,471.01	3,311.15	0					
FYLM-73800-5										
Subtotal					**1**	**$3,266.33**	**$3,266**	**$3,311**	**($45)**	**(1.4)**
Total							**$11,334,911**	**$11,555,646**	**($220,735)**	**(1.9)**
Total for Sample							**$33,984,305**	**$21,338,681**	**$12,645,624**	**59.3**
Total Boeing Credits Issued									**$1,657,805**	

[1] The DoD IG Calculated Total Price represents the Boeing Burdened Unit Price multiplied by the CCAD/Boeing Contract Quantity.
[2] WA: Weighted Average.
Note: We burdened Army prices with Boeing's 34 percent wrap rate. We did not burden DLA prices with Boeing's 34 percent wrap rate because the prices already reflected a markup.
[3] After we issued the draft report, Boeing provided the Army refunds for samples 3, 5, 91, 371, and 398, and stated that it was pursuing a refund for sample 45.

Office of the Assistant Secretary of Defense (Logistics and Material Readiness) Comments

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3500 DEFENSE PENTAGON
WASHINGTON, DC 20301-3500

LOGISTICS AND
MATERIEL READINESS

MAR 2 8 2011

MEMORANDUM FOR DIRECTOR FOR PRICING AND LOGISTICS ACQUISITION,
ACQUISITION AND CONTRACT MANAGEMENT,
OFFICE OF THE INSPECTOR GENERAL

THROUGH: DIRECTOR, ACQUISITION RESOURCES AND ANALYSIS

SUBJECT: Response to DoDIG Draft Report on "Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot," (Project No. D2010-D000CH-0077.000)

As requested, I am providing responses to the general content and recommendations contained in the subject report. The report highlighted inventory and pricing issues on the Army's performance-based logistics (PBL) contract with The Boeing Company. However, a more balanced report should include this arrangement's success in achieving improved warfighter support while reducing overall sustainment costs.

To address issues raised during the course of this report, the attached PDASD(L&MR) memorandum was issued on December 20, 2010, to the Services and the Defense Logistics Agency (DLA). The memorandum states that policy is being strengthened on the use of government-owned inventory before procuring contractor-owned inventory and that existing performance-based arrangements should be reviewed to ensure maximum use of on-hand and due-in government-owned inventory.

The draft DoDIG Recommendation A.2. and L&MR responses are as follows:

Recommendation A.2.:
We recommend that the Principal Deputy Assistant Secretary of Defense (Logistics and Materiel Readiness):

a. Develop an equitable plan to use the consumable items transferred to Defense Logistics Agency Aviation under the 2005 Base Realignment and Closure recommendations that do not have sufficient demand outside the Corpus Christi Army Depot contract with Boeing.

b. Develop and issue policy and procedures that:

1) Instruct the Services not to transfer consumable items to the Defense Logistics Agency when demand requirements are going to be met under contractor logistics support or performance-based logistics contracts managed by the Services.

2) Require the Services to use the DoD EMALL to determine whether the Defense Logistics Agency has excess inventory for all consumable items being procured from sources other than the Defense Logistics Agency under either contractor logistics support or performance-based logistics sustainment strategies, quantify the excess inventory, and develop a plan to use any excess inventory.

Response A.2.a:
Concur. The December 20, 2010, PDASD(L&MR) memorandum addressed the use of on-hand and due-in government inventory as a standard practice on all PBL arrangements and partnering arrangements. Therefore, no additional plan is required.

Response A.2.b.1:
Partially Concur. Policy already exists in DoD 4140.26-M, Volume 2, "The DoD Integrated Materiel Management (IMM) for Consumable Items: Item Management Coding (IMC) Criteria" that addresses the transfer of consumable items. Consumable items that are unique to a weapon system, when the items have been included in a performance-based life-cycle product support (PBL), can be retained by the Military Departments' contractor or agent. Consumable items not unique to a weapon system (common items) will be assigned to DLA or General Services Administration for management.

Response A.2.b.2:
Non Concur. DoD EMALL is not a tool that identifies excess; however, it does identify quantities and prices of DLA consumable inventory. The Military Services and DLA determine excess inventory levels based on demand at a given time. However, DoD 4140.1-R, dated May 23, 2003, policy requires that Military Service program managers collaborate with Military Service and DLA materiel managers and invites their participation in developing and selecting performance-based materiel support strategies. This process should be used to assess the best inventory strategy. We will reinforce this guidance.

Please contact [redacted] and [redacted] if additional information is required.

Alan F. Estevez
Principal Deputy

Attachment:
As stated

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3500 DEFENSE PENTAGON
WASHINGTON, DC 20301-3500

December 20, 2010

LOGISTICS AND
MATERIEL READINESS

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (ACQUISITION, LOGISTICS AND TECHNOLOGY)
ASSISTANT SECRETARY OF THE NAVY (RESEARCH DEVELOPMENT AND ACQUISITION)
ASSISTANT SECRETARY OF THE AIR FORCE (ACQUISITION)
ASSISTANT SECRETARY OF THE AIR FORCE (INSTALLATIONS, ENVIRONMENT AND LOGISTICS)
DEFENSE LOGISTICS AGENCY

SUBJECT: Maximum Utilization of Government-Owned Inventory in Performance-Based Logistics Arrangements

Recent Department of Defense (DoD) Inspector General reports have highlighted the need to review inventories and use government-owned repair parts before procuring the same parts from private contractors through performance-based logistics (PBL) arrangements or contractor logistics support. PBL arrangements are an important method of support for weapons systems and may employ either government-owned or contractor-owned repair parts. When executing commercial product support strategies, particularly in today's environment of affordability and efficiency, use of on-hand and due-in government inventory should be standard practice on all PBL arrangements and partnering agreements. When PBL arrangements utilize commercial sources, stocking objectives should be adjusted accordingly. DoD 4140.01-R (Volumes 2 and 3), "DoD Supply Chain Materiel Management Regulations" provides further guidance on adjusting inventory levels and forecasting to meet changes in demand.

While DoD Instruction (DoDI) 5000.02, "Operation of the Defense Acquisition System," DoDI, 4151.21, "Public-Private Partnerships for Depot-Level Maintenance," and DoD 4140.1-R require full costs and benefits be considered in developing support arrangements, policy is being strengthened to emphasize the utilization of government-owned inventory before procuring contractor-owned inventory. In the interim, existing performance-based arrangements should be reviewed to ensure maximum use of on-hand and due-in government-owned inventory to support good business practices.

Points of contact for this subject are [redacted] and [redacted]

Alan F. Estevez
Principal Deputy

cc:
Commander, US Army Materiel Command
Commander, Air Force Materiel Command
Commander, Naval Air Systems Command
Commander, Naval Sea Systems Command
Commander, Space and Naval Warfare Command
Commander, Naval Supply Systems Command
Commander, Naval Inventory Control Point
Commandant, Marine Corps Logistics Command
Deputy Chief of Staff for Logistics, U.S. Army, G4
Deputy Chief of Naval Operations (Fleet Readiness and Logistics), N4
Deputy Chief of Staff for Logistics, Installations, and Mission Support, U.S. Air Force, A4/7
Deputy Commandant, Installations and Logistics, U.S. Marine Corps

Defense Procurement and Acquisition Policy Comments

Final Report Reference

OFFICE OF THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

ACQUISITION, TECHNOLOGY AND LOGISTICS

MAR 18 2011

MEMORANDUM FOR DIRECTOR FOR PRICING AND LOGISTICS ACQUISITION,
ACQUISITION AND CONTRACT MANAGEMENT,
OFFICE OF THE INSPECTOR GENERAL

THROUGH: DIRECTOR, ACQUISITION RESOURCES AND ANALYSIS 3/22/11

SUBJECT: Response to DoDIG Draft Report on "Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot," (Project No. D2010-D000CH-0077.000)

As requested, I am providing responses to the general content and recommendations contained in the subject report.

Recommendation B.3.:
We recommend that the Director, Defense Procurement Acquisition Policy:

Revised

a. Establish a "rapid improvement team" of logistics and pricing experts to provide technical advice to the Army Aviation and Missile Life Cycle Management Command contracting officer to address inventory and pricing issues on the follow-on contract.

b. Establish policy showing a clear preference for the use of fixed-price incentive contracts on all contracts exceeding $100 million (including option years) unless the Government objective price was developed by an experienced cost/price analysis group.

Response B.3.a:
Partially Concur. We agree with the recommendation to form a rapid improvement team. It is our position, however, that the team of logistics and pricing experts should be assembled and led by the Army. If the Army requires external support, we will help them obtain logistics and pricing expertise from the Defense Contract Management Agency, Defense Contract Audit Agency, and other Defense Components. Accordingly, we believe this recommendation should be redirected to the Army.

Response B.3.b:
Partially Concur. We agree that fixed price incentive contracts should be used when appropriate and will issue a policy memorandum reminding contracting officers to use fixed-price incentive contracts in accordance with the conditions specified in FAR 16.403(b). However, a more appropriate solution is to ensure that adequate experienced pricing resources are available to support all procurements regardless of dollar value.

In order to more effectively use our audit and pricing resources, we recently revised DoD Policy, Guidance and Information (PGI) 215.404-2 to increase the thresholds for field pricing audits to $100 million for cost-type proposals and $10 million for fixed-price proposals. This policy

change allows DCAA to use audit resources on higher risk work that presents greater opportunity for return to taxpayers. More importantly, it ensures that adequate audit resources are available for contract actions exceeding $100 million.

In addition to more effectively employing audit resources, we are hiring a significant number of contract cost/price analysts across the Department. Accordingly in the future, there will be few cases where adequate pricing and audit expertise is not available to analyze contractor proposals exceeding $100 million.

Recommendation D.1.:
We recommend that the Director, Defense Procurement Acquisition Policy:

a. Alert the acquisition community of the value of the DoD EMALL for performing basic price analyses.

b. Issue guidance that requires the Services to use the DoD EMALL to evaluate prices for consumable items on contractor logistics support and performance-based logistics contracts to determine whether those parts could be supplied by Defense Logistics Agency (DLA) at lower prices and develop a strategy to use DLA as the first source of supply when cost-effective and practical.

Response D.1.a:
Concur. We will issue a policy memorandum advising the acquisition community of the value of the DoD EMALL for conducting market research.

Response D.1.b:
Concur. See response to D.1.a above. In accordance with existing policy, we will direct the Services to use on-hand and due-in government inventory. If the performance-based logistics (PBL) or contractor logistics support (CLS) acquisition strategy results in a determination that use of commercial sources is more effective than relying on government material, stocking objectives should be adjusted accordingly.

Please contact [redacted] if additional information is required.

Shay D. Assad
Director, Defense Procurement
and Acquisition Policy

Department of the Army Comments

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
9301 CHAPEK ROAD
FORT BELVOIR, VA 22060-5527

REPLY TO ATTENTION OF:

AMCIR

MAR 9 2011

MEMORANDUM FOR Department of Defense Inspector General (DoDIG), ATTN: [redacted] Room 300, 400 Army Navy Drive, Arlington, VA 22202-4704

SUBJECT: Command Reply to DoDIG Draft Report: Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot (Project No. D2010-D000CH-0077.000) (D1010)

1. The U.S. Army Materiel Command (AMC) has reviewed the subject report. AMC's comments on recommendation A-1 are enclosed. AMC endorses the enclosed comments on the draft report provided by the U.S. Army Aviation and Missile Life Cycle Management Command and the U.S. Army Contracting Command (ACC).

2. The AMC point of contact is [redacted]

TERESA W. GERTON
Executive Deputy to the
Commanding General

2 Encls
1. AMC comments
2. ACC memorandum

Army Materiel Command Comments
DoDIG Draft Report: Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot (Project No. D2010-D000CH-0077.000) (D1010)

Recommendation A.1:
We recommend that the Commander, Army Materiel Command, and the Director, Defense Logistics Agency, establish a team consisting of representatives from the Aviation and Missile Life Cycle Management Command, Defense Logistics Agency (DLA) Aviation, Corpus Christi Army Depot, and Boeing to develop a plan to drawdown excess DoD inventory that could be used to meet Corpus Christi Army Depot requirements. Additionally, provisioning conferences should be held at least annually to revisit the excess inventory situation until it is resolved.

HQAMC Comments:
Partially concur. We agree with the recommendation, however, feel it should be redirected to the Headquarters, Department of the Army (HQDA), Deputy Chief of Staff, G-4 (Logistics) as the lead agency. AMC is an Army Command (ACOM) and HQ DLA is a joint organization. HQDA G-4 should be designated as the lead Army Proponent to deal with Army policy and regulations. AMC stands ready to provide any assistance and will participate in all teams formed. The memoranda released by the Office of the Secretary of Defense (Attachment 1) and the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (Attachment 2) should take care of all future contract requirements to use government owned inventory as the first look. AMC will monitor the progress of the drawdown of excess inventory during the quarterly Due Diligence reviews chaired at the senior executive level.

Enclosure 1

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3500 DEFENSE PENTAGON
WASHINGTON, DC 20301-3500

LOGISTICS AND
MATERIEL READINESS

December 20, 2010

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (ACQUISITION, LOGISTICS AND TECHNOLOGY)
ASSISTANT SECRETARY OF THE NAVY (RESEARCH DEVELOPMENT AND ACQUISITION)
ASSISTANT SECRETARY OF THE AIR FORCE (ACQUISITION)
ASSISTANT SECRETARY OF THE AIR FORCE (INSTALLATIONS, ENVIRONMENT AND LOGISTICS)
DEFENSE LOGISTICS AGENCY

SUBJECT: Maximum Utilization of Government-Owned Inventory in Performance-Based Logistics Arrangements

Recent Department of Defense (DoD) Inspector General reports have highlighted the need to review inventories and use government-owned repair parts before procuring the same parts from private contractors through performance-based logistics (PBL) arrangements or contractor logistics support. PBL arrangements are an important method of support for weapons systems and may employ either government-owned or contractor-owned repair parts. When executing commercial product support strategies, particularly in today's environment of affordability and efficiency, use of on-hand and due-in government inventory should be standard practice on all PBL arrangements and partnering agreements. When PBL arrangements utilize commercial sources, stocking objectives should be adjusted accordingly. DoD 4140.01-R (Volumes 2 and 3), "DoD Supply Chain Materiel Management Regulations" provides further guidance on adjusting inventory levels and forecasting to meet changes in demand.

While DoD Instruction (DoDI) 5000.02, "Operation of the Defense Acquisition System," DoDI, 4151.21, "Public-Private Partnerships for Depot-Level Maintenance," and DoD 4140.1-R require full costs and benefits be considered in developing support arrangements, policy is being strengthened to emphasize the utilization of government-owned inventory before procuring contractor-owned inventory. In the interim, existing performance-based arrangements should be reviewed to ensure maximum use of on-hand and due-in government-owned inventory to support good business practices.

Points of contact for this subject are [redacted] and [redacted]

Alan F. Estevez
Principal Deputy

Attachment 1
p 1/2

cc:
Commander, US Army Materiel Command
Commander, Air Force Materiel Command
Commander, Naval Air Systems Command
Commander, Naval Sea Systems Command
Commander, Space and Naval Warfare Command
Commander, Naval Supply Systems Command
Commander, Naval Inventory Control Point
Commandant, Marine Corps Logistics Command
Deputy Chief of Staff for Logistics, U.S. Army, G4
Deputy Chief of Naval Operations (Fleet Readiness and Logistics), N4
Deputy Chief of Staff for Logistics, Installations, and Mission Support, U.S. Air Force, A4/7
Deputy Commandant, Installations and Logistics, U.S. Marine Corps

Attachment 1
p 2/2

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
ACQUISITION LOGISTICS AND TECHNOLOGY
103 ARMY PENTAGON
WASHINGTON DC 20310

SAAL-ZL

JAN 31 2011

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Maximum Utilization of Government-Owned Inventory in Performance-Based Logistics Arrangements

1. Reference memorandum, Office of the Assistant Secretary of Defense (Logistics and Materiel Readiness), 20 December 2010, subject as above (enclosure). This memorandum highlights a recent Department of Defense Inspector General's report that identified the need to use Government-owned repair parts before procuring from private contractors.

2. The first-use of Government inventory will be standard practice on all performance-based arrangements and partnering agreements when executing product support strategies. Program Executive Officers, Army Logistics Commands, and Army Contracting Command should also review existing processes and establish internal management control procedures to ensure first-use of Government inventories to the maximum extent possible before procuring inventories from commercial sources of supply. Additionally, when arrangements utilize commercial sources, stocking objectives should be adjusted accordingly. Department of Defense (DoD) 4140.01R (Volumes 2 and 3), DoD Supply Chain Materiel Management Regulation provides guidance on adjusting inventory levels and forecasting to meet changes in demand.

3. The point of contact is [redacted]

Encl

Malcolm R. O'Neill
Assistant Secretary of the Army
(Acquisition, Logistics and Technology)

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Attachment 2
p 1/2

SAAL-ZL
SUBJECT: Maximum Utilization of Government-Owned Inventory in Performance-Based Logistics Arrangements

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U.S. ARMY MATERIEL COMMAND
U.S. ARMY AMCOM LIFECYCLE MANAGEMENT COMMAND
U.S. ARMY CECOM LIFECYCLE MANAGEMENT COMMAND
U.S. ARMY TACOM LIFECYCLE MANAGEMENT COMMAND
U.S. ARMY CONTRACTING COMMAND

CF:
ASSISTANT SECRETARY OF THE ARMY (ACQUISITON, LOGISTICS AND TECHNOLOGY) (SAAL-ZS, SAAL-ZG, SAAL-ZE, SAAL-ZR, SAAL-ZP, SAAL-ZN, SAAL-ZC, SAAL-ZT, SAAL-ZL) (wo/encl)
DIRECTOR, ARMY STAFF (wo/encl)
DEPUTY CHIEF OF STAFF, G-1 (wo/encl
DEPUTY CHIEF OF STAFF, G-2 (wo/encl)
DEPUTY CHIEF OF STAFF, G-3/5/7 (wo/encl)
DEPUTY CHIEF OF STAFF, G-4 (wo/encl)
DEPUTY CHIEF OF STAFF, G-8 (wo/encl)
CHIEF, NATIONAL GUARD BUREAU (wo/encl)
CHIEF, ARMY RESERVE (wo/encl)

Attachment 2
p 2/2

DEPARTMENT OF THE ARMY
U.S. ARMY CONTRACTING COMMAND
9301 CHAPEK ROAD
FORT BELVOIR, VA 22060-5527

REPLY TO
ATTENTION OF:

AMSCC-IR

MEMORANDUM FOR [redacted], Director, Internal Review and Audit Compliance Office, Headquarters, U.S. Army Materiel Command, 9301 Chapek Road, Fort Belvoir, VA 22060

SUBJECT: DODIG Draft Report, "Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract with Boeing to Support the Corpus Christi Army Depot", (Project No. D2010-D000CH-0077.000) (AMC D1010) (AMS No. 2010L008D)

1. References:

a. Memorandum, DODIG Draft Report, "Excess Inventory and Contracting Problem Jeopardize the Army Partnership with Boeing to Support the Corpus Christi Army Depot", (Project No. D2010-D000CH-0077.000) (AMC D1010) (AMS No. 2010L008D).

b. Memorandum, Department of Defense Inspector General, 19 January 2011, same as above.

c. Draft Report, Department of Defense Inspector General, 19 January 2011, subject: Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract with Boeing to Support the Corpus Christi Army Depot (Project No. D2010-D000CH-0077.000).

2. After reviewing the documents at references 1b and 1c, the U.S. Army Contracting Command (ACC) concurs with the comments in reference 1a (enclosed).

3. The ACC point of contact is [redacted]

Encl

JEFFREY P. PARSONS
Executive Director

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DEPARTMENT OF THE ARMY
UNITED STATES ARMY AVIATION AND MISSILE COMMAND
6300 MARTIN ROAD
REDSTONE ARSENAL AL 35898-5000

AMSAM-IR

18 FEB 2011

MEMORANDUM THRU [redacted] Director, Internal Review and Audit Compliance Office, US Army Materiel Command, 9301 Chapek Road, Fort Belvoir, VA 22060-5527

FOR Department of Defense, [redacted] Office of Inspector General, 400 Army Navy Drive, Arlington, VA 22202-4704

SUBJECT: DODIG Draft Report, Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot (Project No. D2010-D000CH-0077.000) (AMC D1010) (AMS No. 2010L008D)

1. Reference HQ AMC Tasker A1-SGS.2-1019-5298, 19 Jan 11 SAB.

2. Enclosed are comments to the subject draft report from the US Army Aviation and Missile Life Cycle Management Command (AMCOM). The report was reviewed and comments provided by AMCOM Integrated Materiel Management Center, Corpus Christi Army Depot, and Army Contracting Command.

3. The point of contact is [redacted]

Encl

JAMES E. ROGERS
Major General, USA
Commanding

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COMMAND COMMENTS
DODIG Draft Report
Excess Inventory and Contract Pricing Problems
Jeopardize the Army Contract with Boeing to
Support the Corpus Christi Army Depot
(Project No. D2010-D000CH-0077.000)
(AMC No. D1010) (AMS No. 2010L008D)

Finding A. Excess DoD Inventory:

"AMCOM officials did not effectively use $339.7 million of DoD inventory before procuring the same parts directly from Boeing under the CCAD/Boeing contract to support the Apache and Chinook weapon systems. DoD inventory was not effectively used for the following reasons:

- AMCOM officials did not initially stop "parts explosion" (primary for the Chinook helicopter) after the CCAD/Boeing contract was awarded and they procured the parts from two sources to meet the same requirement.
- AMCOM officials transferred consumable inventory to DLA Aviation in 2008 as part of a 2005 BRAC supply and storage recommendation, but did not transfer requirements for the parts that are now being met by Boeing on the CCAD/Boeing contract.
- DLA, the Army, and Boeing all used different systems to manage inventory and requirements; no system exists that provided total asset visibility or requirements information; and no one had taken responsibility to periodically match available DLA inventory identified in the DoD EMALL with CCAD/Boeing contract requirements.
- DoD had adequate policies and procedures addressing use of DoD inventory before entering into contractor logistics support and performance-based logistics sustainment strategies.

As a result, we identified $242.8 million to $277.8 million of excess DoD inventory that could be used to satisfy CCAD Apache and Chinook helicopter contract requirements ($174.5 million to $198.7 million over the next 5 years with an additional $68.3 million to $79.1 million that could be used to satisfy future contract requirements). In addition, representatives from Boeing stated that they also had $13.1 million of Boeing inventory on hand and $41.9 million due in for CCAD requirements."

Command Comments: The IG identified $242.8 to $277.8M of potential excess DoD inventory that could be used to satisfy CCAD Apache and Chinook helicopter contract requirements at CCAD. However, a detailed review of inventory available to support these platforms at CCAD was performed by AMCOM IMMC. This resulted in a total estimated value of AMCOM and DLA stock that is considered excess for these programs to support CCAD of $72.2M versus the IG's estimate above. Specifics are depicted below:

a. In Aug of 2008 the Aviation and Missile Command transferred items to Defense Logistics Agency (DLA) in accordance with the Base Realignment and Closure Act of 2005. Items were transferred in accordance with the standard process using the U.S. Army wholesale logistics programs. More specifically, the Commodity Command Standard System was used by the Army for this process. Transactions were generated which moved logistics data, to include requirements, to the DLA. Prior to the transfer date, the AMCOM Inventory Managers provided DLA paper copies of all available supply actions that occurred on the applicable items over the last five years. In addition to that, the Apache office provided printouts of the last two years of demand data so that the DLA Inventory Managers could load these into their system in the event that this data did not post to their database.

b. The sample of Apache items which the auditors utilized for their analysis contained inventory levels that were greater than the actual quantities were at the time of the entrance conference. The IG identified the items as Excess DoD inventory that could be used to satisfy Corpus Christi Army Depot (CCAD) contract requirements. Of the Apache items sampled, seven reflected less than 20 months of stock on hand and one 33 months of stock on hand. Also, all of the Apache sample items were procured outside of the Partnership contract to support either field demands or existing National Maintenance Programs. The audit fails to fully consider the fact that the assets procured for the Partnership by Boeing are to be used exclusively for depot level repairs at CCAD and those assets procured by AMCOM are to be used primarily to support non Partnership demands (i.e., field, FMS, RESET). The audit grouped all of the assets together to determine that they were excess to the partnership program. Providing these assets to CCAD would have resulted in the item manager having to make additional procurements to sustain the field demands and would have greatly increased the risk of having grounded aircraft in theater due to lack of parts. The AH-64 program office concurs that 7 of the AH-64 items reflecting a value of $108,446.17 will be offered to CCAD for consumption before purchasing stock from Boeing. This dollar value is compared to the total dollar value of $49,016,203.37 for the 24 Apache items identified by the IG as reflecting an excess position which can be utilized at CCAD. Of the remaining 17 items valued at approximately $48,907,757.20, the Apache program logistics manager non-concurs with the audit findings. These items are not considered to be in an excess position and will be consumed by RESET, FMS and Field requirements.

c. Of the 80 AMCOM managed Chinook items identified by the DoDIG as excess, 9 had less than 36 months of stock on hand and due in at the time of initial DoDIG inquiry. A total of 50.6% of the Chinook items are used by the field in addition to the depot. DLA available excess inventory specific to CCAD support for Chinook reflected $7.9M and AMCOM managed inventory in excess position is estimated at $62.7M.

Recommendation A.3: We recommend that the Commander, Army Aviation and Missile Life Cycle Management Command:

a. Determine and assign responsibility for managing consumable item requirements to meet Corpus Christi Army Depot demands and, if Boeing is assigned responsibility, instruct the

contracting officer to hold Boeing accountable through contract terms, conditions, and appropriate metrics for eliminating the excess DoD inventory.

Command Comments: **Concur.** The AMC Commander issued a memorandum on 11 Aug 2010 to establish the priority for eliminating excess DoD Inventory. Subject guidance is attached to this response and is being implemented within the AMCOM and Army Contracting Command enterprises. This guidance establishes the order of precedence for utilizing repair parts from various sources of supply inventories in fulfilling depot-level maintenance-oriented Performance Based Logistics (PBL) Agreements and Public-Private Partnerships. This establishes a descending priority source of supply as follows: 1) AMC Army Managed Inventory or excess AMC Owned Non-Army Managed Inventory, 2) DLA inventory items (only after AMC inventories have been exhausted). A formal memorandum of agreement (MOA) is being established between CCAD, AMCOM Integrated Material Management Center (IMMC), DLA and Boeing. This memorandum will require that DLA fence available inventory for use on the partnership contract in order to be able to effectively execute this requirement. Previously DLA policy has not allowed this retention of items for depot only use. Estimate execution of the MOA by 30 Mar 2011. This MOA will ensure that government inventory will be utilized as a first priority and the contract will be modified to reflect usage of any applicable Government Furnished Material. Based on the fact that inventory management is at the government's discretion, the contractor will be directed to utilize government inventory. It is recognized that some negotiation of this issue may occur based on the contractor's lay-in of materials for current contract requirements; however, excess DoD inventory will be appropriately managed under this contract concept. Additionally, the follow-on partnership contract requires Boeing to utilize DLA as the preferred supplier for DLA managed items that are determined to be the best value to the Government in terms of price, delivery and quality.

b. Determine whether it is more cost-effective to use some of the 653 excess new direct current motors in inventory (national stock number 6105-01-120-4285), valued at $573,236, versus reworking motors sent to the Corpus Christi Army Depot for Repair.

Command Comments: **Concur.** AMCOM has queried CCAD to identify the cost of reworking the motors. If cost effective, AMCOM plans to use the motors in AMCOM inventory to meet FY12 and part of FY13 requirements. AMCOM inventory would be depleted during FY13 using the current work load projection.

c. Develop a plan to use and/or repackage the shims (national stock number 5365-00-859-6162) in Defense Logistics Agency inventory, valued at $282,687, to meet current Corpus Christi Army Depot Requirements.

Command Comments: **Concur.** If cost effective, AMCOM plans to use the shims in DLA inventory to meet FY12 and part of FY13 requirements. These shims will be purchased from DLA and assembled into packages of 25 ea for issue to CCAD. DLA inventory would be depleted during FY13 using the current work load projection.

Finding B. Spare Parts Pricing Problems:

"AMCOM officials did not effectively negotiate fair and reasonable prices for noncompetitive spare parts procured on the CCAD/Boeing contract. We reviewed costs for 24 high-dollar parts valued at about $34.0 million and identified serious pricing problems with 18 of the parts valued at about $23 million. These pricing problems occurred because neither the Army nor Boeing officials performed adequate cost or price analyses to establish the reasonableness of the proposed subcontract prices that were used to support negotiated prices. The following pricing problems also occurred because Boeing officials routinely proposed, and AMCOM officials accepted, egregiously deficient cost or pricing data based on unrealistically low quantities that had no relationship to the quantities required or the actual price Boeing negotiated with its subcontractors.

- Boeing furnished data to support prices based on dealer quotes, commercial catalog prices for quantities of one, outdated historical data for quantities of one, and competitive commercial quotes for quantities of one to three.

- Boeing furnished certified cost or pricing data that were not complete, accurate, and current at the time of the material certification cutoff date (seven parts).

- Boeing routinely negotiated significantly lower prices with its suppliers shortly after negotiating prices with AMCOM officials and did not share range pricing/quantity discounts with the Army when procurement quantities were increased or when Boeing combined buys, resulting in lower unit prices (seven parts).

- Two parts were priced incorrectly on the follow-on contract, and two other parts were switched from "buy" (purchased parts) to "make" (Boeing manufactured) at significantly higher prices without adequate justification (four parts).

As a result, we calculated that Boeing charged the Army about $13 million (131.5 percent) more than the fair and reasonable prices for the 18 parts ($23 million versus $10 million). Costs for six parts valued at $11.3 million were in line with negotiated prices. During the audit, Boeing provided the Army a credit of $324,616 for one of the incorrectly priced parts. If pricing problems are not addressed, the Army could experience similar overpricing issues on the follow-on CCAD/Boeing contract. Additionally, several potential nonconforming parts were brought to our attention that needs to be addressed."

Command Comments: The material pricing negotiated for the initial partnership contract reflected a population of ~8,000 line items over the course of the contract. In every case, contracting officers utilized approved methodologies in determining fair and reasonable prices based upon the data available at the time of negotiations. Sound pricing methodologies and the ability to effectively price a contract with a significant volume of material require that a sampling technique be developed. DCAA and DCMA used some scientific sampling techniques and typically reviewed items with a proposed bill of material. This involved a comparison of the dollar values for the selected items with the latest vendor quotations, prior

purchase history, Master Orders, contractor performed cost/price analyses, and Memorandums of Agreement.

Two areas were considered in order to validate whether the sampling techniques and overall strategy resulted in a fair and reasonable deal. First, the BCA documented an expected material increase of approximately 25% which will be offset through performance improvements and cost avoidance. Our sampling reveals the overall increase in material cost to be approximately 17% with expected performance improvements achieved. In addition, we requested Boeing provide and DCAA validate the overall rate of return and economic profit on the material sales for the contract. The rate achieved was below the expected negotiated profit and is considered fair and reasonable.

A detailed review of the 18 items identified in this report as reflecting excessive pricing has been conducted. Some of the details of that review will be addressed specifically below; however, it should be noted that for these 18 items, the follow-on contract reflects 7 items priced lower than the IG recommendations and 10 in line with the IG recommendation. The follow-on contract was intensively evaluated utilizing price analysis techniques by the DCMA and contracting teams in addition to the DCAA audit process. This encompassed reviewing all the bill of material items, comparing to historical pricing, Boeing's quotes and purchase order history and ensuring that economic order quantities were reflected in the negotiated prices. This also included reviewing the data Boeing provided during the evaluation and negotiation of these items and the data which was utilized to provide a certificate of cost and pricing for these parts as well.

One of the major factors which must be considered in this contract concept is the dynamic changes that occur to impact the Depot's workload. These are a result of many factors, some of which are Depot Overhaul Factor changes or major program changes. These changes result regularly in fluctuations of quantities of parts required. If the contract is not flexible enough to allow for these type quantity changes, recognizing that this may not lead to lowest price solution by the partner, it negates our ability to meet mission performance, impacting readiness and soldier support.

Recommendation B.2: We recommend that the Commander, Army Aviation and Missile Life Cycle Management Command, instruct the contracting officer to:

a. Obtain refunds from Boeing for the National Stock Numbers priced with defective data (1680-00-245-1833, 3020-00-566-2521, 3120-00-834-1507, 3120-00-866-6099, 1650-00-955-9588, 1560-00-409-4101); unnecessary pass-through costs (1650-00-834-1430); and correct prices on the follow-on contract (1650-00-834-1430-and 3110-01-136-9793).

Command Comments: Cannot concur with allegation of defective data pending results of DCAA audit. Concur with accepting refunds for pricing anomalies for some parts. Details below:

A review of Boeing's information relative to the parts cited as defective has resulted in the determination that five of the 18 items cited in the audit should have reflected different

prices. The USG has received a voluntary refund in a total amount of $1,657,804.62 for five parts (1680-00-245-1833, 3020-00-566-2521, 3120-00-866-6099, 1560-00-409-4101 and 5307-01-163-4676). IG amount identified as "defective" is $1,575,519 compared to the refund cited above.

A DCAA post award audit has been requested but is not complete on this contract; therefore, there is no current basis upon which to determine defective pricing. As Boeing has agreed to submit a voluntary refund based on some discrepancies/anomalies identified in their original prices for the five items referenced above, the USG has accepted this refund at this point in time. Should defective pricing, as defined in legal terms and meeting the DCAA audit parameters, be validated in a post award audit, the appropriate adjustments will be obtained by the USG. It is noted that this would include a review of any contractor offsets for any identified defective data that resulted in understated costs requirements as required by the 1987 Defense Authorization Act. Boeing has identified a sample of items (not all encompassing of material provided under subject contract) which reflects a loss equating to $1,077,665.70. This loss should be considered if a finding of defective data is validated. This is compared to the IG calculated defective amount of $1,575,519. Specific details of each item are identified below:

Sample 5 (NSN 1680-00-245-1833): Boeing has refunded an amount slightly higher, $376,635.39, than the IG recommended refund, due to a slight difference in calculating impact methodology.

Sample 91 (NSN 3020-00-566-2521): Boeing has refunded an amount of $550,005.61 based on Boeing's analysis.

Sample 356 (NSN 3120-00-834-1507): Boeing used a firm price quote for this bearing rather than procurement history to establish the proposed price. The procurement history used by the IG is for a quantity of 2,121 units for the original contract. This is 33 times the quantity specified by CCAD for this contract. Accordingly, the unit price used in the IG calculation is not reasonably related to the firm price Boeing used in its proposal. Other procurement history does not support the IG's calculated unit price. The follow-on contract pricing is in line with the IG recommendations based upon the current information and economic order quantities included in the follow-on pricing. Based upon this review, the USG does not currently find defective data from Boeing for this item and does not currently intend to pursue a refund. In the event that a defective pricing audit determines otherwise, Boeing will be requested to provide an appropriate adjustment.

Sample 371 (NSN 3120-00-866-6099): Boeing has refunded an amount of $159,163.72 that is essentially the same as the IG recommended amount.

Sample 376 (NSN 1650- 00-955-9588): Boeing used a firm competitive quote for this piston rather than procurement history to establish the proposed price. The procurement used by the IG to calculate impact did not occur until over one year after agreement on price. In the event that a defective pricing audit determines otherwise, Boeing will be requested to provide an appropriate adjustment.

Sample 398 (NSN 1560-00-409-4101): Boeing has provided a refund of $76,848.50 for this assembly that is substantially the same as the IG suggested refund.

Sample 45 (NSN 1650-00-834-1430): (Unnecessary pass-thru costs and correct price on follow-on contract.) Boeing procured this part (a motor) from Goodrich as a commercial item based on a price quote. Boeing used the CCAD provided part number to obtain a price quote. A review of the data indicates that the Boeing personnel responsible for this purchase contract were not aware that Goodrich in turn obtained the motor from Eaton under a different Eaton part number. Boeing has, on other CH-47 contracts, obtained this motor directly from Eaton, under the Eaton part number, at a substantially reduced price. Boeing is pursuing a refund from Goodrich for the apparently excessive markup by Goodrich for the Eaton motor. Boeing has stated they will refund AMCOM an appropriately adjusted amount upon recovery from Goodrich. The follow-on contract quantity will be supplied with Government Furnished Material in existing inventory.

Sample 415 (NSN 3110-01-136-9793): The follow-on contract will utilize DLA supplied inventory.

b. Procure National Stock Number 1650-00-834-1430 directly from the original equipment manufacturer unless Boeing procures the part from the original equipment manufacturer at a fair and reasonable price.

Command Comments: **Concur.** As stated above, the follow-on contract will be supplied with Government Furnished Material in existing inventory.

c. Request a refund from Boeing for the National Stock Numbers for which lower prices were negotiated with suppliers shortly after prices were negotiated with the Army (3110-01-356-0489, 6105-00-463-4901, 6105-00-251-2494, 1615-01-219-8666, 5340-01-161-1199, 3120-00-881-0018, 1650-00-955-9586).

Command Comments: **Non-Concur.** Based upon the firm fixed price nature of this contract, the bulk of the risk is inherently on the contractor. The contractor develops pricing based upon manufacturing and vendor prices for a 5 year contract with initial proposal submission, which also adds risk to the contractor based upon a potentially changing economic environment. The requirement for the contractor to provide 100 percent of the material to the depot to meet the workload forecast adds additional risk to the contractor as he should "lean forward" to purchase material and is at risk of acquiring some material that may never be utilized by the depot based on the dynamic environment of the depot workload. This adds risk to the contractor relative to the cost of holding inventory.

Based upon a review of the items cited above the USG does not have justification to request a refund for pricing for these based upon the following data:

Sample 7 (NSN 3110-01-356-0489): Boeing used a supplier quote to establish its proposed price for this ball bearing. Boeing's proposed quantity was based on input from CCAD. The procurement used by the IG to calculate impact was not awarded until more than two months after the material certification

cutoff date. More importantly, the purchase order was awarded at a maximum price, and the pricing used by the IG was not agreed between Boeing and the supplier until seven months after the material cutoff date. There is no basis for requesting a refund.

Sample 13 (NSN 6105-00-463-4901): Boeing used a supplier quote to establish its proposed price for this armature assembly. Boeing's proposed quantity was based on input from CCAD. The procurement used by the IG to calculate impact was not awarded until more than six months after the material certification cutoff date. There is no basis for requesting a refund.

Sample 20 (NSN 6105-00-251-2494): Boeing used an expired quote to establish its proposed price for this AC motor. Boeing's proposed quantity was based on input from CCAD. The procurements used by the IG to calculate impact were not awarded until 20 and 23 months after the material certification cutoff date. There is no basis for requesting a fund.

Sample 167 (NSN 1615-01-219-8666): Boeing used an expired quote to establish its proposed price for this transmission clutch. Boeing's only previous purchase of this part was in 1990. Boeing's proposed quantity was based on input from CCAD. The procurement used by the IG to calculate impact was not awarded until several months after the material certification cutoff date. There is no basis for requesting a refund.

Sample 200 (NSN 5340-01-161-1199): Boeing used a mix of a firm quote and range pricing to establish its proposed price for this nut and bolt retainer. Boeing's proposed quantity was based on input from CCAD. The procurements used by the IG to calculate impact were not awarded until years after the material certification cutoff date. There is no basis for requesting a refund.

Sample 324 (NSN 3120-00-881-0018): Boeing used the average price of the five previous buys to establish its proposed price for this sleeve bushing. Boeing's proposed quantity was based on input from CCAD. The procurements used by the IG to calculate impact were not awarded until after the material certification cutoff date. There is no basis for request a refund.

Sample 338 (NSN 1650-00-955-9586): Boeing used a firm quote to establish its proposed price for this linear actuating cylinder head. Boeing had never previously procured this item as a spare part. Boeing's proposed quantity was based on input from CCAD. The procurement used by the IG to calculate impact was not awarded until two months after the material certification cutoff date. There is no basis for requesting a refund.

d. Procure, or have Boeing procure, national stock number 6105-00-463-4901 from Defense Logistics Agency Aviation at the significantly lower price to save $2,259,688 over the next five years.

Command Comments: Partially Concur. Stock is available in the Boeing Warehouse to support FY 11 overhaul requirements. Boeing will be directed to utilize DLA stock to support FY12 overhaul requirements.

e. Ensure that the follow-on contract does not include any clauses that would prevent the Army from obtaining economic order quantity pricing.

Command Comments: Concur. The follow-on contract does not contain any clauses or language that would preclude the Army from obtaining economic order quantity pricing.

f. Document reasons for Boeing manufacturing parts at significantly higher prices than what the prices would have been had the parts been purchased.

Command Comments: Does not require Concur/Non-Concur.

Sample 3 (NSN 3120-00-138-4083): Boeing used a firm quote to establish prices for this sleeve during Phase II and IIA, even though Boeing's parts management system always coded this part as a make part. As the quoting supplier was unwilling to price these parts for 2007-2009 for Phase III, citing fluctuating steel prices, Boeing revised its proposal for Phase III using Boeing's estimate of the cost to make these parts. During review of this item, Boeing realized that it had miscalculated the amount of raw material required to manufacture this item, and has therefore made a refund to reflect the proper amount of raw material.

Sample 206 (NSN 1680-01-105-6441): Boeing priced this part based on its manufacturing costs. Boeing made these manifold assemblies because this part is coded in the Boeing manufacturing planning system as a make part and Boeing already had the material on-hand. The Boeing make-buy decision is a function of Boeing's production system; Boeing did not generate a new make-buy decision with respect to the CCAD supply contract. The qualification of the parts purchased by DLA would need to be explored in some detail before Boeing could commit to obtaining the parts from DLA.

g. Determine whether the suppliers that produce the higher level assembly for National Stock Number 3120-00-138-4083 can use these parts as Government-Furnished Material and if not, determine whether it is more cost effective to continue the repair program and use Corpus Christi Army Depot inventory, Defense Logistics Agency inventory, and Boeing inventory valued at more than $2.2 million as part of the repair program.

Command Comments: Does not require Concur/Non-Concur.

The CCAD Chinook Horizontal Hinge Pin program was initially cancelled based on the extensive time required to process these for repair through the Depot. The process time was having a negative impact on rotor head production, thus impacting readiness. This was a business decision made by IMMC senior level management in order to ensure that the depot met readiness requirements. Currently a spares contract is not in place to offer sleeves as GFM to the next higher assembly (horizontal hinge pin). A maintenance and overhaul contract is in place (expires August 2011); however due to the supply position of the pin, a commercial overhaul requirement does not exist at this time. Sleeves will be offered as GFM to the next spare/maintenance and overhaul contracts once the requirement materializes.

AMCOM is providing pins as GFM to the partnership contract. As the inventory is drawn down, action will be taken to determine if it is economically feasible to reinstate the processing of horizontal hinge pins at the depot. If so, action will be taken to drawdown sleeve inventory.

h. Negotiate a fixed price incentive contract for the follow-on contract so both parties would benefit from Boeing negotiating lower prices with its suppliers.

Command Comments: **Non-Concur**. Based upon the extreme variations that occur regularly in the depot workload, establishment of a target cost would require quarterly adjustments creating a tremendous administrative burden and an increased probability of inaccuracies in determining incentive earned. It is recognized that a fixed price incentive contract provides the opportunity to adjust profit and establish a final contract price by a formula based on the relationship of final negotiated total cost to total target cost. This would require an audit of actual costs each year by a DCAA office in order to validate actual costs, which could take from 4 – 6 months to finalize, based on the current timeframes and business processes DCAA is currently working to. Additionally, establishment of a reasonable target cost would be a challenge based on the dynamic environment at the depot regarding workload and Depot Overhaul Factor changes which drive material cost.

This follow-on contract will include an incentive to reduce the material consumed in depot production and/or price of material, thereby reducing the total material cost to the depot. This will involve technical and engineering methodologies to streamline processes, reduce DOF's, reduce scrap, increase yields from the depot backshops and vendor cost reductions. This will also lead to a pricing structure that drives economic order quantity considerations. These initiatives will also help maximize the performance based portions of the contract. We are seeing success on another partnership arrangement with this concept and anticipate it would also be of benefit to the Boeing contract.

i. Involve Boeing engineers in determining whether the direct selector sets and linear actuating cylinder pistons are nonconforming parts and address the expiration dates related to re-lubing bearing.

Command Comments: **Concur**. CCAD has initiated a Corrective Action Request (CAR) identifying the non-conformance of re-lubing and packaging for the bearings with recommended action required to correct the deficiencies. CCAD is also coordinating with CCAD Quality and AMRDEC engineering personnel to determine the appropriate action required by Boeing for the direct selector sets and linear actuating cylinder pistons.

j. Implement procedures to promptly notify Boeing and the Government regarding potential nonconforming parts.

Command Comments: **Concur**. The follow-on contract includes a Clause, Nonconforming Misidentified Material, which to addresses non-conformance and misidentification of material. In addition, CCAD Path Forward is to develop and implement a Letter of Instruction for processing and resolution of non-conforming material.

Finding C. Payments for Unachieved Repair Turnaround Time Improvements:

"AMCOM officials overstated repair turnaround time (RTAT) improvements for Phase II of the CCAD/Boeing contract. AMCOM officials calculated a 46.7 percent performance improvement, but the actual RTAT performance improvement ranged from 26.1 percent to 36.9 percent. Therefore, AMCOM officials paid Boeing for performance improvements that were not achieved. RTAT improvements were overstated because AMCOM officials used inconsistent methodologies to calculate the Phase II RTAT contract baseline. Specifically, baseline calculations included shiftwork, while the calculations for actual contractor performance were based on days, with no regard for shiftwork. In addition, AMCOM officials did not enforce the Phase III contract requirements for pursuing refunds when Boeing did not meet RTAT metrics. As a result, we calculated that AMCOM officials overpaid Boeing for Phase II RTAT improvements in the first 3 option years by $3.8 million to $8.4 million, and Boeing owes the Army a refund of $2.4 million for the fourth option year; for a total amount due to the Army of $6.3 million to $10.9 million. Boeing also owes the Army an additional $538,688 for not meeting Phase III RTAT contract requirements."

Recommendations C: We recommend that the Commander, Army Aviation and Missile Life Cycle Management Command, instruct the contracting officer to:

1. Request a refund of $4.2 million ($3,835,367 plus $382,694) to $8.8 million ($8,426,325 plus $382,694) from Boeing for overpayments on Phase II programs and for not meeting contract requirements on Phase III programs during the first 3 options years.

Command Comments: **Non-concur in the recommendation.** The process utilized in establishing a repair turnaround time (RTAT) baseline at the beginning of the contract was the result of a manual review process in lieu of a fully automated process. Therefore, depot experienced personnel applied some judgment factors in developing this baseline. A current review of the data which established the original repair turn-around time incentive has been conducted in light of the IG recommendations regarding the issue of an inaccurate initial baseline which included shift work. An analysis of the data, which excludes the shifts for baseline calculation based on CCAD's automated system data, indicates a valid baseline that can be used to calculate RTAT reductions is 179 vice the original 212 established for the contract. This is higher than the IG's calculated 153 baseline. Utilizing the 179 day baseline does not support obtaining a refund from Boeing for years 1 – 3 but establishes an incentive due to Boeing of $9,980,186 for repair turn-around reduction based on the terms established in the contract. This calculation is derived based upon applying the RTAT reduction percentage applied against the value of the material contract line item of the specific phase of the contract. The incentive paid to Boeing for option years 1 through 3 of $9,674,183 is less than the amount calculated above (which utilized a revised baseline). This amount is based upon the value of material sold versus the contract established material Contract Line Item (CLIN) price. The USG does not concur that Boeing owes a refund for this portion of the contract. See chart below.

years 1 – 3 but establishes an incentive due to Boeing of $9,980,186 for repair turn-around reduction based on the terms established in the contract. This calculation is derived based upon applying the RTAT reduction percentage applied against the value of the material contract line item of the specific phase of the contract. The incentive paid to Boeing for option years 1 through 3 of $9,674,183 is less than the amount calculated above (which utilized a revised baseline). The USG does not concur that Boeing owes a refund for this portion of the contract. See chart below.

Option Year	Percent Improvement Over Required Minimum			Payment/Refund Based on value of Material Sales			Payment/Refund Based on value of Contract Material CLIN for Phase II		
	Reported (212 day baseline)	DODIG Calculated	USG Recalculated (179 day baseline)	Actual Incentive Paid	DODIG Calculated Incentive	USG Recalculated	Contract RTAT Baseline	DODIG Calculated	USG Recalculated Baseline
1	39.6	16.2	28.3	$2,389,379	$2,389,379	$2,389,379	$4,692,478	$4,692,478	$4,692,478
2	30.6	3.3	17.5	$3,449,437	$2,155,077	$3,449,437	$5,287,708	$3,322,852	$5,287,708
3	15.9	(17.2)	0	$3,835,367	($3,835,367)	$0	$6,983,901	($6,983,901)	$0
Total				$9,674,183	$709,089	$5,838,816	$16,964,087	$1,031,429	$9,980,186

2. Negotiate with Boeing to determine the appropriate refund for not meeting repair turnaround time contract requirements for Phase II and Phase III programs during the fourth option year calculated at $2.6 million ($2,441,701 plus $155,994).

Command Comments: Cannot Concur or Non-Concur. A detailed review of the year 4 incentive data is in process. The fact that verifiable data was available for only 6 months of the year does not provide a totally accurate determination as to Boeing's potential to achieve the contract stated RTAT reductions. This review is scheduled to be completed by 31 Mar 2011.

Finding D. Splitting Requirments for Consumable Items Was Not Cost-Effective:

"The CCAD/Boeing contract was splitting instead of consolidating procurement and material sustainment responsibilities for consumable items. Consequently, Boeing and either DLA or the Army were procuring and managing the same items. Specifically, Boeing was responsible for procuring and managing consumable items used at CCAD (included depot-only and depot-and-field replaceable items); while either DLA or the Army had responsibility for procuring and managing consumable items to meet field-use requirements or foreign military sales. This occurred because:

- The Army and DLA had not developed an effective procurement and material management strategy that addressed the most cost-effective source of supply for consumable items; and

- DoD had inadequate policies and procedures for consolidating procurement and management responsibilities for consumable items, and the strategy of using different sources to procure and manage the same items clearly reduced the ability to obtain economic order quantities and increased overall procurement and material management costs.

As a result, the procurement and material management consolidation goals and associated savings of the consumable item transfer of the 1990s and the 2005 BRAC supply and storage recommendations were not being achieved. The CCAD/Boeing contract was basically contracting out the DLA mission and will decrease competition and the effective use of DLA assets, increase excess capacity, and make DLA increasingly more inefficient, unless DoD develops an effective strategy to procure and manage consumable items. Using the DOD EMALL, we identified that DLA had sufficient inventory to satisfy annual contract requirements for 1,635 parts on the follow-on CCAD/Boeing contract and that the contract price for these parts was $8.0 million, or 51.2 percent, higher than the DLA price. We identified another 431 parts in which the contract price was $10.0 million, or 43.2 percent, higher than the DLA price, but DLA did not have enough inventory to meet contract requirements. We also identified 757 parts in which the contract price was $14.4 million less than the DLA price. In addition, from 2007 through 2009, Boeing made an excessive 35 percent profit on $3.1 million of spare parts purchases from DLA for CCAD requirements."

Command Comments: DA/AMC policy requires a Business Case Analysis (BCA) in order to support procurement of items outside of the normal Inventory Control Point designation. Reference - DODI 4151.21, paragraph 6.5. The decision to enter into a partnership must be supported by a business case analysis considering costs, benefits, and best use of public and private sector capabilities that demonstrates that it is in the best interest of the government.

In accordance with this requirement, a BCA was validated to support this partnership arrangement and projected savings based on a reduction in repair turn-around time, increased availability of parts, improved processes; enhanced performance or efficiency; reduction in acquisition cycle time, and improved readiness and reliability. The initial contract established that DLA would be a preferred provider for DLA managed items that are determined to be the best value to the Government in terms of price, delivery and quality.

Issues with DLA support are centered around the requirement that the partnership concept requires buying ahead of demand. DLA's business model does not currently support this concept in that their requirement to buy is a funded requisition. Boeing projects items/quantities required and buys ahead of demand in order to support the depot production schedule.

The goals for reducing repair turn time were achieved in that a minimum of 36% reduction was achieved for both CH-47 and AH-64. This contributed to improved readiness and was achieved through increased availability of parts and improved processes. Additionally, AMCOM analysis

of the positive impact to readiness from 2004 to 2009, based on the reduction in backorders for items included in this partnership support concept equates to an increase to readiness of 10.9% for both platforms. This correlation is drawn based upon modeling developed by Institute for Defense Analyses which indicates that a 1-month increase in average backorder age would lower mission capable rates by 2.8 percentage points 5 months hence. From 2004 – 2009, backorders were reduced in age from 148 days down to 30; reduced in quantity of backorders from 701 down to 57, and number of backorder requisitions reduced from 292 down to 22.

Recommendations D.1: We recommend that the Director, Defense Procurement and Acquisition Policy:

a. Alert the acquisition community of the value of the DoD EMALL for performing basic price analyses.

Command Comments: The AMCOM acquisition community is aware of the DoD EMALL and reviews the data in that system. It is one tool available for use in conducting price analysis on material; however, it does not provide full fidelity for total pricing comparisons. This can be used in conjunction with other price analysis techniques.

b. Issue guidance that requires the Services to use the DoD EMALL to evaluate prices for consumable items on contractor logistics support and performance based logistics contracts to determine whether those parts could be supplied by Defense Logistics Agency at lower prices and develop a strategy to use the Defense Logistics Agency as the first source of supply when cost effective and practical.

Command Comments: As stated above, it is one tool available for use in conducting price analysis on material; however, it does not provide full fidelity for total pricing comparisons. This can be used in conjunction with other price analysis techniques. AMCOM is working a strategy as described in General Dunwoody's memorandum of 11 Aug 2010 and an MOA with AMCOM, CCAD, DLA and Boeing to utilize DLA inventory when available and cost effective.

Recommendations D.2: We recommend that the Commander, Army Aviation and Missile Life Cycle Management Command, instruct the contracting officer to:

a. Include a contract clause that addresses an appropriate markup on items that Boeing obtains from the Defense Logistics Agency and negotiate appropriate refund for the $1.1 million profit that Boeing made on purchases from the Defense Logistics Agency.

Command Comments: Non-Concur at this time.

Boeing purchased material from DLA to support requirements at the depot at a cost of $3,112,999.36. This cost represents 252 unique part numbers, a total of 29,653 items. Boeing sold to CCAD 201 unique part numbers, 21,943 total items at a contract price of $3,083,357.12 Some of these parts Boeing sold at a gain, others at a loss. In aggregate, Boeing made 14% profit on items purchased from DLA and sold to CCAD, without any burdens applied. As of the end of 2009, $861K of the parts, i.e., representing a quantity of 7,710 items, purchased from

DLA were still on the Boeing shelf. These parts were purchased to meet an immediate need, but then were never requested by CCAD from Boeing. Because DLA is not an authorized source of supply for Boeing, Boeing will not sell these parts to any customer other than CCAD. Accordingly, Boeing took the risk with respect to these and many other parts, and unless Boeing can find a means to reasonably dispose of these parts, Boeing will not recover its investment.

Based upon current DLA policy, Boeing has been unable to establish a long term agreement with DLA to utilize them as a firm source of supply for a population of specific depot unique items on a recurring basis. This inhibits Boeing's ability to ensure parts availability at point of need with DLA as the primary source for specific items. This is a risk factor for Boeing in their contractual responsibility to meet parts demands for the depot schedule, should DLA not be able to provide required parts. This requires Boeing to ensure their supply chain stands ready to provide these parts. This, as well as the cost of holding excess inventory in the example cited above, is considered "consideration" for some price increase applied to DLA purchased items. Also as stated above, some DLA purchased items were higher than Boeing suppliers. One of the focuses for this contract is to provide some flexibility in order to ensure that parts are available when required which may not always reflect the lowest unit price for individual material. However, the total value of the costs versus benefits at the total contract is validated. This issue will continue to be reviewed during the course of the contract in order to ensure that Boeing overall prices are not excessive when utilizing DLA as a source of supply under the contract.

b. Require Boeing to obtain consumable items from the Defense Logistics Agency as the first source of supply when cost-effective and practical.

Command Comments: **Concur.** The current contract requires Boeing to utilize DLA as the preferred supplier for DLA managed items that are determined to be the best value to the Government in terms of price, delivery and quality. However, as DLA policy does not currently support "fencing" parts in order to ensure availability at point of need, Boeing could potentially be at risk in their contractual responsibility to meet parts demands for the depot schedule should DLA not have required parts available.

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
9301 CHAPEK ROAD, FORT BELVOIR, VA 22060-5527

REPLY TO ATTENTION OF

AMCOP-SLA

11 AUG 2010

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Order of Preference for Utilizing Repair Parts from Various Source of Supply (SOS) Inventories in Fulfilling Depot-Level Maintenance-Oriented Performance Based Logistics (PBL) Agreements and Public-Private Partnerships

1. References:

a. AR 700-127 (Integrated Logistics Support)

b. HQAMC MEMO, 29 Sep 2006, Subj: PBL Implementation Policy Memorandum

c. AMC Partnership Business Development Plan

d. DoD Instruction 4151, 21, "Public-Private Partnerships for Depot-Level Maintenance"

e. Federal Acquisition Regulations (FAR) Part 8, Required Sources of Supplies and Services

2. Purpose: The purpose of this memorandum is to ensure that U.S. Army Materiel Command (AMC) Life Cycle Management Commands (LCMCs) establish a requirement for contractors and Government implementers to first use Government inventories to meet Depot-Level Maintenance oriented PBL agreements and Public-Private Partnerships before acquiring new repair parts from commercial sources of supply. The applicable guidance for Depot-Level Maintenance PBL agreements are found in paragraph 1, references a and b. References c and d of paragraph 1 comprise the guidance that applies to Public-Private Partnerships for Depot-Level Maintenance.

3. Scope: Life Cycle Management Commands (LCMCs) are directed to establish a requirement for Depot-Level Maintenance oriented PBL agreements and Public-Private Partnerships that recommends the following order of preference for utilizing various types of SOS repair part inventories:

a. Army customer-site inventories should be exhausted first, then any available AMC Army Managed Inventory (AMI) or excess AMC owned Non-Army Managed Inventory (NAMI) should be expended.

b. After the aforementioned AMC inventories have been completely depleted, the Defense Logistics Agency (DLA) is the next source of supply from which to draw repair parts. Only after these AMC inventories have been exhausted, should any DLA inventory items for which DLA is the primary source of supply to be used.

AMCOP-SLA
SUBJECT: Order of Preference for Utilizing Repair Parts from Various Source of Supply (SOS) Inventories in Fulfilling Depot-Level Maintenance-Oriented Performance Based Logistics (PBL) Agreements and Public-Private Partnerships

4. In accordance with paragraph 1, reference e, maintenance support contractors may only purchase from commercial supply sources after all Government stocks are exhausted. In addition, before exercising a contract option for an existing maintenance support contract or granting a contractual extension for one, AMC LCMC maintenance activities shall assess the feasibility of executing contract modification(s) that implement the foregoing policy requirements.

5. Effective immediately, the Headquarters (HQ), AMC (G-4/7/9) is the responsible agent to enforce the existing Army inventory contractual language in policies and procedures required to accomplish the AMC Mission.

6. Any questions or concerns pertaining to contractual policies and procedures should be addressed directly to the Army Contracting Command (ACC), with a courtesy copy provided to HQ, AMC, Director, G-4/7/9 Support Operations. Any policy and procedures requiring coordination with the HQDA, will be staffed through HQ, ACC to HQ, AMC for review and coordination.

7. This directive shall remain in effect until rescinded, modified, or replaced by superseding guidance from HQ, AMC or other authority.

8. Point of Contact for this action is [redacted]

ANN E. DUNWOODY
General, USA
Commanding

DISTRIBUTION:
B
H
Commander, U.S. Army Contracting Command (ACC)
Commander, Army Sustainment Command (ASC)
[redacted] Director Logistics Readiness Center, US Army CECOM Life Cycle Management Command, Fort Monmouth, NJ 07703-5000
[redacted] Acting Director Commodity Business Operations, US Army TACOM Life Cycle Management Command, Warren, MI, 48397-9000
[redacted] Acting Director Integrated Materiel Management Center, US Army AMCOM Life Cycle Management Command, Redstone Arsenal, AL 35898-5230

UNCLASSIFIED

Defense Logistics Agency Comments

DEFENSE LOGISTICS AGENCY
HEADQUARTERS
8725 JOHN J. KINGMAN ROAD
FORT BELVOIR, VIRGINIA 22060-6221

IN REPLY
REFER TO J3

Feb 25 2011

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL
ATTN: MR. HENRY KLEINKNECT

SUBJECT: Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot (Project No. D2010-D000CH-0077.000)

As requested in your memorandum dated January 19, 2011, subject as above, DLA has reviewed the report and concurs with recommendation A.1. The POC for this action is [redacted]

For external audit related questions, please contact [redacted] and [redacted]

for JEFFREY R. CURTIS
Executive Director
Material Policy, Process & Assessment

Federal Recycling Program Printed on Recycled Paper

Defense Contract Management Agency Comments

DEFENSE CONTRACT MANAGEMENT AGENCY
6350 WALKER LANE, SUITE 300
ALEXANDRIA, VIRGINIA 22310-3241

February 14, 2011

MEMORANDUM FOR DIRECTOR OF PRICING AND LOGISTICS ACQUISITION, ACQUISITION AND CONTRACT MANAGEMENT, OFFICE OF THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Response to FOUO Draft Department of Defense Office of Inspector General (DoDIG) Audit Report "Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot," dated January 11, 2011

Reference: (Project No. D2010-D000CH-0077.000)

We have attached the Headquarters, Defense Contract Management Agency's comments to the recommendations as requested in the subject draft report.

Point of contact for this audit is [redacted]

Ronald Youngs
Acting Executive Director
Contracts

Attachment:
As stated

DCMA Response to FOUO Draft DoDIG Audit Report "Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot," dated January 11, 2011

DCMA provides the following comments to the draft report.

RECOMMENDATION B.1.: We recommend that the Director, Defense Contract Management Agency, instruct the Contractor Purchasing System Division Director to identify the purchasing system at Boeing-Philadelphia as high risk and schedule a purchasing system review to determine whether Boeing conducts subcontractor price and cost analyses before prime contract negotiations and whether quantity discounts are being adequately passed on to the Government.

DCMA RESPONSE: Concur. Boeing Philadelphia's Purchasing Systems has been identified as high risk. A Contractor Purchasing System Review has been scheduled for July 11, 2011. Our review will address the timing of subcontractor price analysis and whether discounts are passed along to the government.

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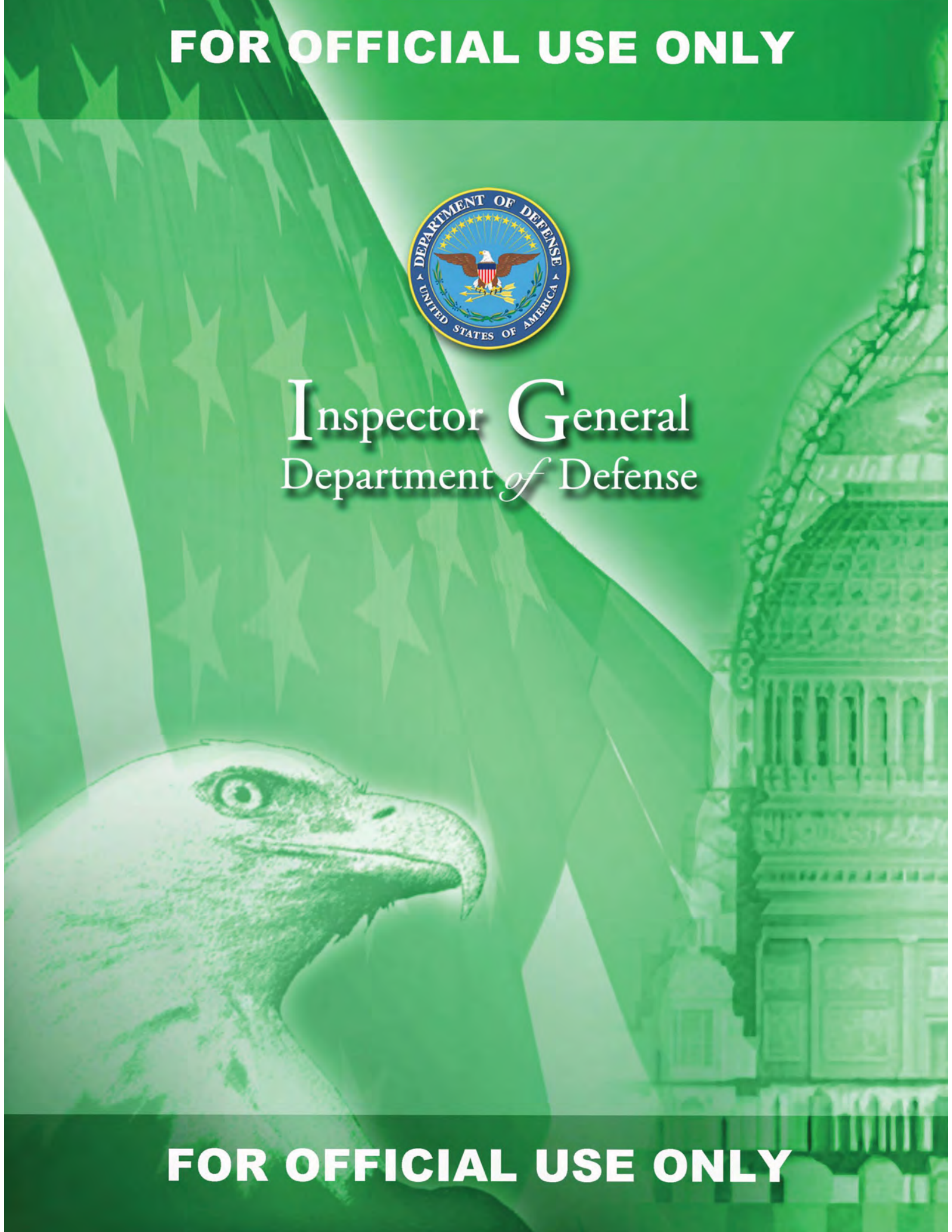

Inspector General
Department of Defense

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